DMB

June 9, 1983

Docket No. 50-295
Docket No. 50-304

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Vice President
Post Office Box 767
Chicago, IL 60690

Gentlemen:

We have received the attached Federal Emergency Management Agency (FEMA) letter dated April 8, 1983, and associated final exercise evaluations on the offsite emergency preparedness exercises conducted on July 29, 1981, October 7, 1981, and January 18, 1983, by the States of Illinois and Wisconsin and Kenosha and Lake Counties. These final exercise evaluations list some recommendations (which are referred to in the FEMA letter and attachments as deficiencies) regarding the offsite emergency response plans for the area around the Zion Nuclear Generating Station, Units 1 and 2.

We fully recognize the the recommendations to be implemented may involve actions by several governmental agencies which are not under your control. Nonetheless, we expect the subject of offsite preparedness for the area around the Zion facility to be addressed by you as well as others.

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In accordance with 10 CFR Part 2.790 of the Commission's regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room.

Sincerely,

J. A. Hind, Director
Division of Radiological and
Materials Safety Programs

Enclosures: As stated

cc w/encls:
D. L. Farrar, Director
of Nuclear Licensing
K. L. Graesser, Station
Superintendent
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
Philip L. Willman, Esq.
Assistant Attorney General
Environmental Control Division
Reed Neuman, Esq., Assistant
Attorney General
Mayor John B. Spencer
City of Zion

cc w/o encls:
D. Bement, FEMA, Region V
J. Norris, PM/NRR
F. Pagano, IE
R. Lickus, RIII

RIII	RIII	RIII	RIII	RIII
Phillips/jp	Axelson	Paperiello	Boyd	Hind
06/08/83				6/9/83

Federal Emergency Management Agency

Washington, D.C. 20472

PRINCIPAL STAFF			
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APR 8 1983

MEMORANDUM FOR: Edward L. Jordan
Director, Division of Emergency Preparedness
and Engineering Response
Office of Inspection and Enforcement

FROM: Richard W. Krimm
Assistant Associate Director
Office of Natural and Technological Hazards

SUBJECT: Evaluation of Offsite Emergency Preparedness Exercises at the Zion Nuclear Power Station (Illinois/Wisconsin)

Attached are copies of the (1) Post Exercise Evaluation for the Zion Nuclear Power Station exercise which was conducted on July 29, 1981; (2) Final Report of Re-Exercise which was conducted October 7, 1981; and (3) Final Exercise Report of the January 18, 1983, exercise.

The January 18, 1983, Final Exercise Report indicates the exercise demonstrated an adequate level of radiological emergency preparedness offsite to ensure the health and safety of the public living in areas surrounding Zion. The States of Illinois and Wisconsin exercised in a small-scale capacity while Kenosha and Lake Counties both exercised in a full-scale capacity during the most recent exercise.

There were no significant deficiencies cited for Lake County, Kenosha County, Illinois, or Wisconsin during this exercise. The exercise report has been provided to both Illinois and Wisconsin for a review of the minor deficiences which surfaced during the January 18, 1983, exercise.

Attachment

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MAY 20 1983

Federal Emergency Management Agency

Region V 300 South Wacker, 24th Floor, Chicago, IL 60606 (312) 353-1500

MAR 4 1983

MEMORANDUM FOR: Assistant Associate Director, Office of Natural and Technological Hazards
Attention: Megs Hepler, Field Operations Branch
FROM: Acting Chief, Technological Hazards Branch

SUBJECT: Exercise Final Report, Zion Site-Specific Off-site Exercise, January 18, 1983

Attached is the Zion Exercise Final Report of the January 18, 1983, exercise. The report follows the guidance prescribed in the April 15, 1982, memorandum regarding Radiological Emergency Preparedness Exercise Evaluation Reports. Copies of the report have been forwarded to the States of Illinois and Wisconsin.

The contents of the report cites adequately demonstrated levels of radiological emergency preparedness for Illinois and Lake County Emergency Services and Disaster Agencies and Wisconsin and Kenosha County Divisions of Emergency Government. There are no exercise major deficiencies for these units of government. Only a limited number of exercise minor deficiencies exist which can be easily corrected. Wisconsin is currently revising its State plan to correct planning deficiencies raised by the Region V Regional Assistance Committee.

Dan Bement

Attachment

PART I

FINAL REPORT

Zion Nuclear Generating Station

Small-Scale Joint Emergency Exercise
January 18, 1983

Exercise Participants	Number of Evaluators
State of Illinois	3 Federal/2 Contract
Lake County	2 Federal/4 Contract
State of Wisconsin	2 Federal/3 Contract
Kenosha County	1 Federal/2 Contract
Zion Nuclear Generating Station	Unknown - Observed by NRC
Involved States Not Participating	None
Involved Localities Not Participating	None

March 4, 1983

Prepared by the:

Federal Emergency Management Agency, Region V
Natural and Technological Hazards Division
Tchnological Hazards Branch
Federal Center
Battle Creek, Michigan 49016

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PART II

EXECUTIVE SUMMARY

This is the Final Exercise Report for the Zion Nuclear Generating Station emergency preparedness exercise of January 18, 1983. The exercise was small scale for the States of Illinois and Wisconsin, and full-scale for Lake County, Illinois, and Kenosha County, Wisconsin. The exercise was conducted during normal duty hours beginning at 8:00 a.m. and concluding at 5:00 p.m. The exercise scenarios and Federal evaluator list is attached. The Nuclear Regulatory Commission staff of Region III evaluated the on-site activities of the power plant.

The Illinois State Emergency Services and Disaster Agency Emergency Operations Center in Springfield was activated and staffed during the exercise. As this was a small-scale exercise, the Springfield Emergency Operations Center supported the State Region V Emergency Operations Center at Wheaton and Emergency Services and Disaster Agency Forward Command Post at the Wadsworth Scales.

The Illinois Department of Nuclear Safety also had their mobile laboratory located at the Wadsworth Scales. This forward facility was supported by the Department of Nuclear Safety Emergency Operations Center in Springfield.

The Lake County Community Coordination Center was fully staffed and operational during the exercise. Several communities in Lake County were operational during the exercise.

The Wisconsin State Emergency Operations Center, in Madison, was activated and staffed to provide warning, direction and control, communications and accident assessment. The State also provided two radiological field sampling teams and one health monitoring team to further support Kenosha County. The State's Southeast Area Emergency Operations Center, located at Wakesha, was minimally staffed and served as a radio relay point between the State Headquarters and Kenosha County and provided communications with the radiological field teams. The State's mobile communications van was dispatched to Kenosha and was set up in and operational from the parking lot adjacent to the County Emergency Operations Center. The new Kenosha County Emergency Operations Center in the Public Safety Building in Kenosha was fully staffed during the exercise.

The Joint Public Information Center at the Moose Lodge, in Zion Illinois, was staffed by representatives of the State of Illinois, Lake County, Illinois, State of Wisconsin and Commonwealth Edison Company.

Many elected city and County officials actively participated in the decision-making process during the exercise. This indicated to the evaluation teams that these officials were very interested in the effectiveness of the emergency plans to protect the public in the event of an accident at the Zion facility.

The Prompt Alerting and Notification System was demonstrated in both States during this exercise. The evaluations of the demonstrations are included in Part III, Summary IV of this report.

The Federal observation team has concluded that the States of Illinois and Wisconsin, with the respective Counties of Lake and Kenosha, have adequately demonstrated the capability to protect the population in the vicinity of the Zion Nuclear Generating Station in the event of an accident. The specific comments regarding the off-site governmental jurisdictions, based on the observations of the Federal observation team follow.

ILLINOIS

I. EMERGENCY OPERATIONS, FACILITIES AND RESOURCES
(Space, Internal Comm., Displays, Security)

State

Since this was a small-scale exercise for the State, the evaluation team was located at the Emergency Services and Disaster Agency Region V (Wheaton) facility and the Emergency Services and Disaster Agency and the Department of Nuclear Safety Forward Command Posts (Wadsworth Scales). The Emergency Services and Disaster Agency Region V Emergency Operations Center is a good facility but map displays during this exercise could have provided additional information, particularly displays showing evacuation routes and congregate care centers. Outgoing message procedures could be improved.

The Department of Nuclear Safety mobile laboratory was adequate to conduct sample analysis. It appears that the laboratory had been put into service recently and requires additional equipment. The mobile laboratory staff appeared not to have been kept up to date on exercise events. Improvements have been made in communications (readiness) capabilities.

Messages received by the Emergency Services and Disaster Agency van could be more timely. Security around the Forward Command Post was not as strong as previous exercises.

Local

The emergency operations facility at the Lake County Community Coordination Center and the municipal emergency operations facilities are rated as good. Wall displays showing evacuation routes, relocation centers and population distribution were not posted at the Lake County Community Coordination Center. Back-up communications at municipal operations centers need to be tested during subsequent exercises.

II. ALERTING AND MOBILIZATION OF OFFICIALS AND STAFF
(Staffing, 24-Hour Capability, Alerting Timeliness)

State

Alerting and mobilization of State officials and staff was conducted in a timely manner. It was not clear during this exercise who backs up the staff at the Emergency Services and Disaster Agency Region V office.

Additional on-the-job training is recommended for the Department of Nuclear Safety mobile laboratory personnel to enhance their 24-hour continuous operational capability.

The Emergency Services and Disaster Agency van lacked a trained communications officer.

Local

County and municipal governments maintain a communications network on a continuous basis. Staffing at Lake County and the municipalities was accomplished on a timely basis. Lake County demonstrated a complete shift change. Municipalities demonstrated partial shift changes. Full shift changes should be demonstrated in future exercises.

Two specific points for improvement were noted by the Lake County evaluation team.

1. Training is needed at North Chicago to ensure prompt implementation of staff alerting procedures;

2. Radio communications with ambulances in transit should be demonstrated.

III. EMERGENCY OPERATIONS MANAGEMENT
(Organization, Control, Leadership, Support by Officials, Decision Making)

State

Emergency operations management at the State level was rated good.

The Department of Nuclear Safety sample handling duties were assigned, organized and the staff was familiar with their assigned duties.

Briefings to keep the State Forward Command Post staff abreast of the exercise were not conducted. It is recommended that periodic staff meetings/briefings be conducted.

Evaluators located in Illinois and Wisconsin concluded there is a need for closer coordination of information between Illinois and Wisconsin, particularly concerning decisions made in Illinois that have impact in Wisconsin. It is recommended that Illinois consult and coordinate with Wisconsin prior to releasing messages that impact in Wisconsin. A review of exercise messages indicate that, at times, there was a significant time delay between the time a decision was made and the message transmitting the decision was received and verified.

Local

The Lake County Community Coordination Center demonstrated strong emergency management operations. The staff at the Lake County Community Coordination Center was well organized with a good cross-section of key County and municipal officials positioned in the facility. The individual in charge of the staff at the Community Coordination Center maintained effective control. Coordination was enhanced through the use of periodic briefings. Decision making was conducted on a timely basis. There was good support and participation by elected officials during the exercise.

Adequate written procedures for emergency action consistent with utility recommendations and off-site conditions were evident.

There is some evidence of a need for additional training at Park City.

IV. PUBLIC ALERTING AND NOTIFICATION
(Means of Notification - Sirens, Vehicles, or Other Systems)

State

Not observed at the State level during this exercise.

Local

The prompt notification system, outdoor sirens, was activated as part of the January 18, 1983, exercise. Members of the Federal evaluation team were positioned in the field to verify the sounding of the sirens. Sirens numbered 2,3,5 and 6 were clearly heard. Sirens 1 and 7 were faintly heard while sirens numbered 4 and 8 were not heard. It is not known how many sirens did not sound since evaluators were not positioned near each siren. An unevaluated retest of the siren system was conducted at approximately 1:15 p.m. Attention should be given during regular monthly tests of the system to ensure that problems have been corrected.

The Federal Emergency Management Agency is drafting guidance and will, in the future, conduct tests throughout the country to certify the effectiveness of prompt notification systems.

V. PUBLIC AND MEDIA RELATIONS
(Publications, Press Facilities, Media Briefings, Release Coordination)

State

A Joint Public Information Center was established at the Zion Moose Lodge. Spokespersons from the State were at the Joint Public Information Center to coordinate public information releases with the utility, Lake County, Illinois, the State of Wisconsin and Kenosha County, Wisconsin.

We note that the Joint Public Information Center is 2.2 miles by road from the reactor. The evaluation team recommends that a new location farther away from the plant be selected.

It is recommended that additional typewriters be made available for use by the media.

Local

A spokesperson from Lake County was at the Joint Public Information Center to coordinate public information releases with other media center staff.

VI. ACCIDENT ASSESSMENT
(Staff and Field Operations, Monitoring, Equipment, Technical Calculations, Use of PAGs)

State

The Department of Nuclear Safety has field and mobile laboratory instrumentation capable of completing rapid hazard assessment at a nuclear power plant incident. Additional training for new Department of Nuclear Safety personnel will further enhance this capability.

Local

A State responsibility and was not observed at the local level.

VII. ACTIONS TO PROTECT THE PUBLIC
(Sheltering, Evacuation, Reception & Care, Transportation)

State

This was a small-scale exercise for the State. Evaluators were located at the Emergency Services and Disaster Agency's Region V office and at the Forward Command Post. Observations at these locations indicate the State demonstrated the capability to protect the public within Lake County by timely issuance of recommendations for protective actions. The evaluation team felt that the protective action recommendation, for the public within 2-5 miles of the plant, restricting travel for 30 days was too conservative based on the calculated iodine concentrations.

Local

Lake County officials implemented the State's recommendation for sheltering in a timely manner. A demonstration of evacuation and reception procedures was conducted during the exercise.

VIII. HEALTH, MEDICAL, AND EXPOSURE CONTROL MEASURES
(Access Control, Adequacy of Equipment, Use of KI)

State

Adequate dosimetry packets were issued in a timely manner to the Department of Nuclear Safety and the Civil Air Patrol emergency workers. The Department of Nuclear Safety staff at the Forward Command Post continually calculated field team doses and made assignments based on their findings. Emergency Services and Disaster Agency staff at the Forward Command Post did not utilize dosimetry packets during this exercise. Recommend this be done during future exercises. The decision to recommend Potassium Iodide to emergency workers was premature in the opinion of the evaluation team.

Given the projected dose, the decision to shelter the general population was correct. The procedures for storage and disposal of high activity samples was not clearly established at the Forward Command Post.

Local

Lake County and the municipalities adequately demonstrated health, medical, and exposure control measures during this exercise. Potassium Iodide was available for distribution to emergency workers. The present dosimetry is acceptable. The Zion fire department provided a location for the decontamination of emergency equipment had this been necessary. Exposure records were maintained for emergency workers. A demonstration of transportation and decontamination of an injured person was provided by Victory Memorial Hospital during the November 1982 medical drill.

IX. RECOVERY AND REENTRY OPERATIONS
(Adequacy of Plans and Procedures)

State

The Department of Nuclear Safety has developed a series of Protective Action Guides to be utilized when considering the commencement of recovery and reentry operations.

Communications and information flow between the Department of Nuclear Safety Headquarters and their forward command mobile facility can be improved.

Local

Lake County officials provided a good demonstration of recovery and re-entry operations - the procedures for returning to normal living conditions having first been explained by a staff person from the Department of Nuclear Safety.

X. Relevance of the Exercise Experience
(Benefit to Participants, Adequacy of the Scenario)

State

The evaluators believe this exercise was of benefit to those State agencies that participated in this exercise. The State of Illinois did adequately support local governments responsible for taking emergency protective actions. Scenarios developed for future exercises should have a greater impact on Wisconsin and Kenosha County.

Local

The scenario adequately tested the capability of Lake County and the communities of Lake County within the plume exposure pathway to provide an integrated response to a nuclear power plant emergency.

WISCONSIN

I. EMERGENCY OPERATIONS FACILITIES AND RESOURCES
(Space, Internal Comm., Displays, Security)

State

The primary and back-up communications at the State Emergency Operations Center and the Southeast Area Emergency Operations Center worked well during the exercise. The Accident Assessment Room within the Emergency Operations Center is somewhat cramped for space. The Radiological Health Division's Map of Sampling Points is inconsistent with Table J-1 of NUREG 0654. Internal message handling procedures need to be streamlined.

Local

Kenosha County exercised their new Emergency Operations Center in the basement of the Public Safety Building even though it was not fully completed. The back-up radio communications for the telephone system are scheduled to be installed in February. Some system for alleviating sound levels should be considered. The evaluation team feels that this is a good Emergency Operations Center.

II. ALERTING AND MOBILIZATION OF OFFICIALS AND STAFF
(Staffing, 24-Hour Capability, Alerting Timeliness)

State

Alerting and mobilization of the State and Southeast Area Emergency Operations Center staffs went well. An outstanding capability for 24-hour activation of the emergency response organization exists. A back-up communications system is needed to assure prompt alerting of the field monitoring teams resident in Kenosha County. The prepositioning of field monitoring teams from other parts of the State was unnecessary as the scenario allowed adequate time for deployment during the exercise.

Local

The Kenosha County Emergency Operations Center was staffed promptly. Key operations staff were present within several minutes of being alerted. Most service chiefs were present within 30 minutes and the Emergency Operations Center was fully staffed within 45 minutes. Primary communication was by telephone. Some delays in alerting were encountered when the persons in the Emergency Operations Center making calls had to stop and answer other phones.

III. EMERGENCY OPERATIONS MANAGEMENT
(Organization, Control, Leadership, Support by Officials, Decision Making)

State

Management in the Wisconsin State Emergency Operations Center was good. A representative at the Utility Emergency Operations facility would be desirable. Briefings should have included accident assessment personnel.

Coordination between Illinois and Wisconsin needs improvement. It appears that Illinois, on two occassions, implemented protective action recommendations without consulting Wisconsin. The first instance did not directly involve citizens of Wisconsin. The second incident, sheltering sectors N. P. and Q out to 10 miles, did impact on Wisconsin citizens and was apparently without consultation between the two States. The procedures for coordination need to be improved.

Local

Emergency operations management within the Kenosha County Emergency Operations Center was much improved. The Emergency Operations Center staff was well organized. The County Executive is designated, in the plan, as the officer in charge and he was effectively in charge of the Emergency Operations Center staff. Effective coordination was enhanced through the use of regular staff briefings. Second shift personnel were briefed prior to assuming their duties in the Emergency Operations Center. The support of elected officials was excellent.

IV. PUBLIC ALERTING AND NOTIFICATION
(Means of Notification - Sirens, Vehicles, or Other Systems)

State

This activity was not observed at the State level.

Local

Sirens were sounded within 15 minutes after verification of the General Emergency Classification. The Sheriff's and Fire Departments are responsible for notifying those segments of the population not reached by fixed siren systems. Mobile sirens were activated in the Pleasant Prairie area. In other areas not reached by fixed siren systems, activation of mobile sirens was simulated. Four members of the evaluation team were able to monitor siren activation.

The Federal Emergency Management Agency is drafting guidance and will in the future conduct tests throughout the country to certify the effectiveness of the prompt notification system.

V. PUBLIC AND MEDIA RELATIONS
(Publications, Press Facilities, Media Briefings, Release Coordination)

State

Although this was not part of the small-scale exercise for the State, Wisconsin demonstrated an outstanding capability in this area. Public information staff in Madison sent frequent status reports by minicomputer to the Joint Public Information Center at the Moose Lodge in Zion. The public information staff at the Joint Public Information Center were able, by editing the computer display, to rapidly convert these reports to press releases.

Local

Kenosha County did not have a spokesperson at the Joint Public Information Center. A Public Information Officer was available in the County Emergency Operations Center. Information was routinely exchanged between the Emergency Operations Center and the State public information staff at the Joint Public Information Center. The County should have a spokesperson at the Joint Public Information Center.

Radio Station WLIP covered the exercise throughout the day and repeatedly advised their listeners that the siren sounding was only a test.

VI. ACCIDENT ASSESSMENT
(Staff & Field Operations, Monitoring, Equipment, Technical Calculations, Use of PAGs)

State

The State has shown great improvement in the area of accident assessment in both field team and staff operations. All deficiencies noted were minor. Accident assessment staff handled calculations well. The scenario was good in this regard as no source term data was available and provided a good test for the accident assessment staff. Additional staff training is required, particularly for those who functioned on the second shift. The field teams were trained and equipped. The resident field team needs permanent record dosimeters. The State plan is currently being rewritten to reflect improvements in the accident assessment area. The State Mobile Laboratory is being outfitted and is expected to be operational by late summer.

Local

State function - not observed at the local level.

VII. ACTIONS TO PROTECT THE PUBLIC
(Sheltering, Evacuation, Reception & Care, Transportation)

State

Not observed at the State level during this small-scale exercise.

Local

Service chiefs directed their agency personnel to carry out actions to implement sheltering and to prepare for the possibility of evacuation. Social Services personnel contacted hospital and nursing homes to confirm the number of individuals requiring emergency transportation.

Mobility impaired individuals not in institutions must call the Emergency Operations Center if they need emergency transportation. A list of the permanently mobility impaired persons in the Inhalation Zone that require public emergency transportation should be developed, maintained, and updated.

VIII. HEALTH, MEDICAL AND EXPOSURE CONTROL MEASURES
(Access Control, Adequacy of Equipment, Use of KI)

State

Not observed at the State level during this small-scale exercise.

Local

Direction was given from the Emergency Operations Center for distribution of dosimeters to emergency workers. These emergency workers were told to read their instruments periodically. Available dosimeters are high range only. Emergency workers need additional training on the effects of radiation, procedures for decontamination and on the use of dosimetry.

IX. RECOVERY AND REENTRY OPERATIONS
(Adequacy of Plans and Procedures)

State

Not observed at the State level for this small-scale exercise.

Local

Timely directions were given from the Emergency Operations Center for recovery and reentry.

X. RELEVANCE OF THE EXERCISE EXPERIENCE
(Benefit to Participants, Adequacy of the Scenario)

State

This was a small-scale exercise for the State. The small-scale participation by the State in direction and control, communications, warning, and accident assessment did demonstrate a capability to protect the public and to provide necessary support to Kenosha County.

This exercise was beneficial to participants involved in accident assessment activities and the Department of Emergency Government staff.

The scenario did not test the "limits" of the State's capability in accident assessment due to the low release levels and constant wind direction.

Scenarios developed for future exercises should have a greater impact on Wisconsin and Kenosha County.

Local

The exercise adequately tested the capability of Kenosha County to protect the public in the event of an accident at the Zion Nuclear Generating Station.

This was the third exercise for Kenosha County officials and the first in the new Emergency Operations Center. In the opinion of the evaluation team, the exercise was of benefit to the participants.

This was the third exercise conducted during normal working hours. A future exercise should be scheduled for off-duty hours.

PART III

NARRATIVE DESCRIPTION AND SUMMARY LISTINGS

STATE OF ILLINOIS

SUMMARY I — EMERGENCY OPERATIONS FACILITIES AND RESOURCES
(Space, Internal Comm., Displays, Security)

The ESDA Region V EOC facilities were good. However, map displays should have additional detail, particularly those showing evacuation routes and congregate care centers. Outgoing message procedures need to be improved.

The mobile laboratory was adequate to conduct sample analysis. It was clear that the van had been put into service recently and requires additional equipment. The laboratory was not kept up-to-date on exercise events. Significant improvements have been made by the DNS, especially in increasing readiness capability in communications.

Messages being received by the ESDA van could be more timely. Security could be strengthened. Radio equipment in the ESDA communications van needs study for its most effective use.

F.1.b. Adequacy of Communications Systems (Primary and Backup) with Contiguous State/Local Governments within the EPZs

While communications systems appeared to function well, there were isolated instances where some information was not properly coordinated. That failure to relay information could hinder on evaluation of the incident. The primary instance recognized by the evaluators was at the DNS Mobile Laboratory. The analysis of samples was sent only to the REAC command. The lab was not operating on radio communications network. In the ESDA van some of the radios did not operate properly and equipment is set up to excessive redundancy.

F.1.c. Adequacy of Communications, as Appropriate, with Federal Emergency Response Organizations

Not observed and not appropriate for this scale of an exercise.

F.1.d. Adequacy of Communications Systems Between the Nuclear Facility and Near-Site EOF, and State and for Local EOCs

Communications among the State participants and others on the communications system were good. Significant improvements have been made by the DNS with the installation of communications with the Wheaton Regional Office, the ESDA van at the Forward Command Post and with the Springfield office and among the local EOCs.

C.1.c. Adequacy of Specific State or Local Resources Needed to Support Federal Response

Not observed and not appropriate for this scale of an exercise.

- Adequacy of EOC Working Space and Amenities

All of the work stations have ample work space. No restrictions impede response activities. It should be noted protective shielding on the gamma spectremeter is missing. Storage space for biological samples needs to be incorporated into the mobile lab. Improved procedures need to be developed to isolate samples from Lab staff.

- Adequacy of EOC Internal Communications, Including Equipment, Displays, and Message-Handling Procedures

The areas of internal communications, equipment, displays and message handling procedures were acceptable. Some messages were not handled as expediently as necessary. The mobile lab isn't kept informed of incident status as thoroughly as it should be. Greater effort needs to be put forth in the mobile lab in recording messages and logging them.

- Adequacy of EOC Security Measures

Security was generally good. The Forward Command Post lacked a full-time formal procedure. Checking of those who entered did not persist throughout the exercise period.

H.3. Overall Adequacy of the Emergency Operating Center (EOC)

Work sites were comfortable with adequate work space. They are well equipped for the response function. The mobile lab which was recently purchased needs additional equipment.

J.10.a. Adequate Maps Displayed Showing Evacuation Routes, Sampling Points, Relocation Centers and Shelter Areas

Display maps were available and used during the exercise. The care center map at the State Regional office needs more detail in relation to the location of the centers.

J.10.b. Adequate Maps Displayed Showing Population Distribution Near Nuclear Facility by Evacuation Areas

Maps were available; they were contained in the plan. It is expected they are to be posted during a full-scale exercise and of course during an actual emergency.

SUMMARY II ALERTING AND MOBILIZATION OF OFFICIALS AND STAFF
(Staffing, 24-Hour Capability, Alerting Timeliness)

The alerting and mobilization of ESDA Region V personnel are acceptable.

Alerting and mobilization of the mobile laboratory personnel was prompt and sufficient. Additional OJT is necessary to maintain 24 hours continuous operational capability.

The ESDA van lacked a trained communications officer. As a result, the handling of communications traffic was not adequate.

A.1.e. Capability for 24-Hour Initial Emergency Response and Manning of Communications

An adequate immediate emergency response capability is poised for action. This assessment is true for the State functions for the small scale exercise with the exception of the ESDA van at the Forward Command Post. There is no permanently designated radio operator/dispatcher assigned to this location. This was evident in the weak coordinated communications traffic going through the van.

A.4. Capability for 24-Hour Continuous Emergency Response Operations

More DNS personnel need to be trained in the operation of the gamma spectrometry system to increase the 24 hour operational capability. Greater concentrated effort need to be put forth in training personnel in the use and operation of the multi-channel analyzer.

E.1. Adequacy of Procedures Used for Notif. of Emer. Response Organizations Including Means for Verification of Messages

Not observed

E.2. Adequacy of Procedures Used for Alerting, Notifying and Mobilizing Emergency Response Personnel

Not observed

C.2.a. If Appropriate, Timely Dispatch of a Representative to Licensees Near-Site EOF

Not observed

F.1.a. Adequacy of Emergency Response Communications Equipment Used with Prompt Activation

Not observed

F.1.e. Adequacy of Communications Equipment Used for Alerting and Activating Emergency Response Personnel

Not observed

F.2. Capability to Communicate with Fixed and Mobile Medical Support Facilities

Not observed

H.4. Demonstration of Timely and Efficient Activation and Staffing of EOCs and Other Facilities

Facilities were promptly and adequately staffed and activated for the magnitude of the level of the exercise.

SUMMARY III. EMERGENCY OPERATIONS MANAGEMENT
(Organization, Control, Leadership, Support by Officials, Decisionmaking)

Emergency Operations management was acceptable. The Regional Coordinator must assert more control over personnel in the EOC. He should exercise greater control over the flow of internal information.

Sampling handling duties have been organized and assigned. Laboratory personnel were apprised of their duties and were generally familiar with their assigned tasks. The staff was not kept abreast of the exercise events and other survey data through briefings and other staff meetings.

The DNS was obviously responsible for the technical response to the incident.

The Forward Command Post is under the direction of a senior State representative. He is currently getting trained in his assigned responsibility.

Evaluators who were located in Wisconsin and Illinois conclude there remains, from the July 29, 1981 Zion exercise, a need for a greater coordination of information between both States but with emphasis on the emergency response decision by the State of Illinois

Communication messages, when reviewed following the exercise, indicates significant time lapses between time of message receipt release and verification.

A.1.a. Evidence That Specific Organizations Have Been Adequately Established as Part of Overall Response

Emergency response organizations were established and well regimented for the overall response. The CAP at the State Regional Office need specific assignments to assist in a more effective coordinated response effort.

A.1.d. Demonstration That a Specific Individual, by Title, was Effectively in Charge of Emergency Response

All agencies at the Forward Command Post had an individual, by title, who was effectively in charge of the emergency response.

A.2.a. Demonstration that Primary & Support Functions & Responsibilities Have Been Assigned to Specific Organizational Elements

Primary responsibilities demonstrated were adequate. The support responsibilities reflect discontinuity in the CAP contribution. Additional guidance needs to be prepared defining the role of the CAP. Then the contribution could be effectively focused in providing support assistance.

C.1.a. Evidence That a Specific Person Has Been Authorized to Request Federal Assistance (State Only)

It is in the State Plan that the Governor or his designee (State ESDA Director) has the authority to request Federal assistance. This being a small scale exercise did not necessitate the activation of the system to request assistance.

D.3. An Emergency Classification System was Effectively Used and was Consistent with that of the Utility

The classifications used were consistent with that of the utility and as published in FEMA REP-1.

D.4. Adequate Written Procedures are Used for Emergency Actions Consistent with Facility RECC and Local Offsite Conditions

Not observed

Demonstration of Effective Coord. Between Emergency Response Dir. & Staff, thru Oral Briefings, Staff Meetings, Etc.

The coordination between response organizations at the Forward Command Post and among staff needs improvement. The lack of coordination could lead to problems in the overall conduct of response activities. While not a significant deficiency, it is of utmost importance. It needs correcting and is expected to improve with the development of the new DNS lab equipment.

- Adequacy of Support and/or Participation by Elected Officials

Radio traffic was monitored at the ESDA Communications Van. Therefore, it was known principal officials of State and local government participating in this exercise were actively involved.

SUMMARY IV PUBLIC ALERTING AND NOTIFICATION
(Means of Notification - Sirens, Vehicles, or other Systems, Timeliness)

Not observed

E.5. Evidence of a Reliable System for Dissemination to the Public of Appropriate Info Received from the Licensee, e.g., EBS

Not observed

E.6. Adequacy of Means Used for Notification & Prompt Instruction to the Public in the Plume EPZ (within 15 Minutes)

Not observed

E.7. Effective Use of Instructional Messages for the Public in Affected Areas

Not observed

J.10.c. Adequacy of Means Used for Notifying all Segments of Transient and Resident Population

Not observed

SUMMARY V PUBLIC AND MEDIA RELATIONS
(Publications, Press Facilities, Media Briefings, Release Coordination)

The media facilities were good. Briefing and release coordination was good. Typewriters were not available in the press room. This appears to be a must.

The IPRA news release headings need additional identification when one considers, in an incident of a large magnitude the press from over the world may and undoubtedly will converge on Zion.

The JPIC is 2.2 miles by road from the reactor. It appears that is too close if that sector was to be evacuated. Also plans for the new JPIC call for the facility to be in the shadow of the reactor, in the Westinghouse Training Center.

G.1. Evidence of Dissemination of Information to the Public Within the Last Year

Local hotels and restaurants that were checked had information brochures. It is reported the brochures were mailed to every address in the 10 mile EPZ recently. One problem exists. The information contained is extracted from previous brochures of other Illinois power plants. In the Zion brochure, information is written pertaining to Quad Cities. This must be corrected. Brochures in the Gurnee Holiday Inn had recently been placed there; previously they were not available.

G.2. Evidence of a Public Info Program for Permanent & Transient Pop in the Plume EPZ, such as Posted Notices, Etc.

The brochure is such that residents and transients would understand what to do if they read them. No signs were posted; they didn't want to alarm people going into places of business. No other evidence of information was observed.

G.3.a. Appropriate Points of Contact for the Media Have Been Designated

Illinois had four people. The utility had a staff of 12. Each entity had a designated spokesperson. Lake County did participate at the JPIC.

- Adequacy of Joint Media Facility, Where Appropriate

There was an ample number of telephones and graphic displays. Illinois system of telecopy lagged behind Wisconsin's computer. Security was very good.

There is concern regarding the location of the JPIC. It is located 2.2 road miles from the reactors which seems too close, especially if an emergency occurs. The new JPIC is to be located in the Westinghouse Center which is much nearer the reactor.

- Adequacy of Issued Press Releases

News release sheets need additional information in the heading. To the foreign press it would be difficult to relate to IPRA as an agency of government. Coordination of releases was good. Illinois lagged behind especially on the first release. It was not completed until 11:10 a.m. Significant data was well coordinated except for the afternoon releases. For example, the sheltering release for Wisconsin preceded Illinois by one hour.

G.4.a. A Media Spokesperson Has Been Designated Who Has Access to all Necessary Information

All groups had spokespersons. However, the Lake County spokesperson did not address the media until the afternoon (the morning spokesperson didn't arrive until 11:00 a.m.). The Technical representative handled the media inquiries in an effective manner.

G.4.b. Adequacy of Arrangements for Exchange of Information Among Spokespersons

All media spokespersons were in the same room allowing for ease of communications. The releasing of certain information was not timely. This could pose difficulties because two States were involved and needed the information simultaneously.

G.4.c. Adequacy of Coordinated Arrangements for Rumor Control Measures

Rumor control was tested and found adequate. Two calls were used to activate the arrangements and resulted in a good exercise.

SUMMARY VI ACCIDENT ASSESSMENT
(Staff and field operations, monitoring, equipment, technical calculations, use of PAGs)

The DNS has field and mobile laboratory instrumentation capable of completing a rapid hazard assessment of a nuclear power plant incident. Through training of new personnel, familiarization with new instruments and linking of mobile laboratory data systems with REAC, a greater capability will be realized.

H.7. Adequacy of Offsite and Radiological Monitoring Instruments

The multi-channel analyzer is a sophisticated piece of equipment and is adequate for mobile lab analysis. The computer link of the analyzer to the Springfield computer greatly increased the analytical capability. Shielding for the analyzer would greatly aid its sensitivity.

H.12. An Adequate Central Point Has Been Established for Receipt and Analysis of Field Monitoring Data and Sample Media

The sample delivery point was clearly established with the capability to survey samples, staff and vehicles. The transfer site for samples was established and staffed. A "clean" person to transfer samples was utilized. The mobile lab handled analytical duties. There is no clearly established site for the storage and isolation of samples which need to be retained for further analysis or special disposal.

I.7. Adequacy of Capability and Resources for Field Monitoring Within the Plume EPZ

The multi-channel analyzer appeared adequate for identification of radio nuclides by gamma ray energies but calibration of instruments for quantitative activity measurements was not made. Shielding would aid in increasing instrument sensitivity.

I.8. Adequate Capability to Make a Rapid Assessment of Magnitude & Location of Liquid or Gaseous Radiological Hazards

The capability to measure radioactivity in liquids and solids will be strengthened when new laboratory and field personnel become familiar with their equipment. The capability to make rapid assessment exists in the equipment in the field and in Springfield.

I.9. Capability for Measurement of Radioiodine Concentrations in Plume EPZ Under Field Conditions to 10 F-7 (State Only)

The Department of Nuclear Safety Headquarters has computer dose models that allow this type of calculation based upon the utility's release rates. The DNS has field instruments that measure this concentration but rely upon laboratory analysis. Because of new equipment and personnel, this capability was not fully demonstrated.

I.10. Capability for Relating Measured Parameters to Dose Rates and Estimated Integrated Doses (State Only)

Not observed

I.11. Capability for Locating and Tracking Airborne Radioactive Plume With Aid of Federal and/or State Resources (State Only)

Not observed

J.10.m. Capability to Recommend, Protective Action, Based on PAGs, in Plume EPZ (State Only)

Not observed

C.3. Evidence of Availability & Capability of Radiological Laboratories (State Only)

The mobile lab was operational from both an equipment and a staffing capability. Springfield computer facilities added to the laboratory capability. The full capabilities of both sets of equipment were not established. Expanded sample analysis capabilities, thermoluminescent dosimeters, readout and biological sample storage areas would improve the facilities.

SUMMARY VII ACTIONS TO PROTECT THE PUBLIC
(Sheltering, evacuation, reception and care, transportation)

Adequacy of methods used in relocation of populace is acceptable. The Regional Coordinator effectively communicated the need for sheltering with McHenry County. The communications with McHenry County was not logged. Following initial contact, there was no verification of safe arrival of evacuees.

The evaluation team felt that the protective actions recommendation for the public within 2-5 miles of the plant, restricting travel for 30 days was too conservative based on the calculated iodine concentration.

J.2. Coordination with Utility for Movement of Onsite Individuals to Offsite Locations

Not observed

J.9. Capability for Implementation of Protective Measures

Not observed

J.10.d Adequacy of Methods Used for Protecting Mobility Impaired Persons, Including Institutionally Confined

Not observed

J.10.g. Adequacy of Methods Used for Implementing Relocation of Populace

Not observed

J.10.k. Adequacy of Organizations Identification of and Means for Dealing with Potential Impediments to Evacuation

Not observed

J.11. Adequacy of Protective Measures in Ingestion EPZ, Including Dairy Facilities, Food Processing Plants, etc. (State Only)

The evaluation team felt that the protective actions recommendation for the public within 2-5 miles of the plant, restricting travel for 30 days was too conservative based on the calculated iodine concentration.

J.10.h. Adequate Relocation Centers Have Been Established at Least 5 Miles & Preferably 10 Miles Outside the Plume EPZ

Not observed

- Adequacy of Facilities, Supplies & Equipment at Relocation and/or Mass Care Centers

Not observed

- Adequacy of Staffing at Relocation and/or Mass Care Centers

Not observed

J.12. Adequacy of Procedures for Processing Evacuees in Relocation Ctrs, Including Health Care, Decon & Rad Monitoring, etc.

Not observed

SUMMARY VIII HEALTH, MEDICAL, AND EXPOSURE CONTROL MEASURES
(Excess Control, Adequacy of Equipment, Dosimetry, Use of KI)

Adequate dosimetry packets were issued in a timely manner to DNS and CAP emergency workers. The DNS continually calculated field team doses and issued assignments based on these observations. ESDA cannot account for personnel dosimetry that was previously provided by DNS.

When considering exposure control, the State's decision was to shelter the general population rather than to issue potassium iodide. The projected dose would support their decision. The decision to recommend potassium iodide to emergency workers was premature.

Storage and disposal of high activity samples was not clearly established.

J.10.e. Adequacy of Provisions for Use of KI for Emergency Workers and Institutionalized Persons in Plume EPZ

Potassium iodide administering was provided for with certain response organizations; some did not take action. It was felt the administering of potassium iodide was premature in that iodide was detected by the utility on site.

J.10.f. Adequacy of Methods Used in Making Decisions to Administer KI to Central Population

The decision was to shelter the general population rather than to issue potassium iodide and the projected dose would support this decision.

J.10.j. Adequacy of Control of Access to Evacuated Areas

Not observed

K.3.a. Adequacy of a 24 Hour A Day Capability to Determine Dose Received by Emergency Workers

Emergency workers were well equipped with dosimetry. A contract exists with a laboratory for 24 hours evaluation service.

K.3.b. Demonstration of Adequate and Frequent Emergency Worker Dosimeter Readings & Maintenance of Dosage Records

The DNS provided dosimetry packets to their staff and members of the Civil Air Patrol. The DNS continually requested dosimetry readings from their field teams and calculated their accumulating dose. ESDA has been issued dosimeters for incidents but were unable to locate the packets.

K.4. Evidence that an Adequate Decision Chain Has Been Established to Authorize Exposure for Emer Workers in Excess of PAGs

The Department of Nuclear Safety continually calculated their field team doses and issued assignments based on these doses. Guidance was provided to other agencies regarding stay times. There was no reason for the emergency workers to exceed their PAGs.

K.5.a. Evidence that Appropriate Action Levels Have Been Specified for Determining Need for Decontamination

Not observed

K.5.b. Adequacy of Measures and Decontamination of Emergency Personnel, Supplies, and Equipment, and for Waste Disposal

Non-hazardous waste from sample collection and processing was disposed of in a plastic bag in the back of a van. No collection site for high activity waste or for high activity waste storage was established.

L.1. Adequate Capability Demonstrated by Local and/or Backup Hospital and Medical Services for Handling Personnel

Not observed

L.4. Adequate Capability Demonstrated for Transportation of Radiological Accident Victims to Medical Support Facilities

Not observed

M.4. Capability for Periodic Estimation of Total Population Exposure (State Only)

The capability to calculate population dose was not demonstrated. This is especially important when people were sheltered rather than evacuated, when there was a 24 hour time jump permitting this calculation to be completed and when these values may influence the recovery process.

SUMMARY IX RECOVERY AND RE-ENTRY OPERATIONS
(Adequacy of Plans and Procedures)

The DNS has developed PAGs which are considered when recommending reentry and recovery actions. Communications and information flow between the Department of Nuclear Safety Headquarters and their forward command mobile facility can be improved.

M.3. Adequacy of Established Means for Informing Response Org That Recovery and Reentry Can Be Initiated (State Only)

There was a failure on the part of the DNS to collect for analysis, the liquid and solid samples. The only samples processed were 5 swipe samples upon which the decision for recovery and reentry was based.

M.1. Adequacy of Procedures Demonstrated for Rentry and Relaxation of Protective Measures Allowing Reentry

The scenario did not adequately permit demonstration of this element. The DNS has developed PAGs which can be considered when recommending reentry. Very few samples were completed to verify recover and reentry recommendations. DNS Headquarters did not provide their forward command van rationale for recovery and reentry even though 24 hours had passed in the scenario.

SUMMARY X RELEVANCE OF THE EXERCISE EXPERIENCE
(Benefit to Participants, Adequacy of the Scenario)

It is believed the exercise was of an assist in furthering the skills of the exercise participants. The scenario did not adequately test the "recovery and reentry planning and post-accident operations" of the State plan.

N.1.b. Adequacy of Scenario to Test Capability to Mobilize State and Local Personnel and Resources

The scenario did adequately test the State's capability to mobilize for the small scale exercise.

N.1.a. Adequacy of Ex. to Test Integrated Capabilities & Major Portions of the Basic Existing Response Elements in Affected Org

Mixed reviews were given the exercise benefits. If the exercise was carried out to the end of the scenario greater benefits would be realized particularly in the DNS mobile lab.

STATE OF ILLINOIS

LAKE COUNTY

SUMMARY I — EMERGENCY OPERATIONS FACILITIES AND RESOURCES
(Space, Internal Comm., Displays, Security)

Physical facilities in the Lake County Community Control Center and the local Emergency Operations Center are good. At some locations, shelter areas, and population distribution were not displayed even though they were available in the Emergency Operations Centers.

There is a need in local jurisdictions to test the backup communications system during an exercise.

F.1.b. — Adequacy of Communications Systems (Primary and Backup) with Contiguous State/Local Governments within the EPZs

Primary and backup communications systems at Lake County Community Control Center, Zion, Gurnee, Waukegan, Winthrop Harbor and Park City were good. The backup system for North Chicago should be tested during an exercise.

F.1.c. — Adequacy of Communications, as Appropriate, with Federal Emergency Response Organizations

The Lake County Community Control Center and the local jurisdictions would, according to plan, go through the Illinois Emergency Services and Disaster Agency for contact with Federal Agencies.

F.1.d. — Adequacy of Communications Systems Between the Nuclear Facility and Near-Site EOF, and State and for Local EOCs

Telephone was the primary communications system between the Lake County Community Control Center and the utility. Radio was used as the backup system.

C.1.c. — Adequacy of Specific State or Local Resources Needed to Support Federal Response

Not observed

- — Adequacy of EOC Working Space and Amenities

Space was adequate, well lighted, clean, and warm at the Community Control Center. The same conditions were observed at the Emergency Operations Centers in Zion, Gurnee, Park City, Winthrop Harbor, Waukegan and North Chicago. Ventilation should be improved at the Waukegan Emergency Operations Center. There was ample working equipment and telephones in all areas observed.

- Adequacy of EOC Internal Communications, Including Equipment, Displays, and Message-Handling Procedures

Internal communications were adequate in all locations. Message handling procedures were adequate. Status boards were posted and maintained current.

- Adequacy of EOC Security Measures

Security was very good in all areas.

H.3. Overall Adequacy of the Emergency Operating Center (EOC)

All Emergency Operations Centers were adequate.

J.10.a. Adequate Maps Displayed Showing Evacuation Routes, Sampling Points, Relocation Centers and Shelter Areas

Maps showing evacuation routes, relocation centers, and shelter areas were not displayed at the Lake County Community Control Center. These maps were available in the plan. Waukegan needs to post maps for shelter/relocation centers. North Chicago needs to post maps showing relocation centers. Gurnee and Zion should post maps showing relocation centers.

J.10.b. Adequate Maps Displayed Showing Population Distribution Near Nuclear Facility by Evacuation Areas

Maps showing population distribution by evacuation area were not displayed at the County Community Control Center. Zion did not have population density maps displayed in the Emergency Operations Center.

SUMMARY II ALERTING AND MOBILIZATION OF OFFICIALS AND STAFF
(Staffing, 24-Hour Capability, Alerting Timeliness)

The County and local governments maintain a communications network around the clock, so that initial contact can be made at any hour. The primary system for the alerting of emergency staff is by telephone. This system worked well during this exercise. Staffing of all facilities was accomplished promptly. A complete shift change was demonstrated by the Lake County Community Control Center. Capability for around-the-clock staffing was demonstrated by partial shift changes at the local Emergency Operations Centers. A full shift change should be demonstrated at a future exercise.

Two specific points for improvement were noted by observers. Training is needed at North Chicago to ensure prompt implementation of staff alerting procedures. Radio communications with ambulances in transit should be demonstrated.

A.1.e. Capability for 24-Hour Initial Emergency Response and Manning of Communications

The regular 24-hour public safety communications center of Lake County and the municipalities fulfill this function.

A.4. Capability for 24-Hour Continuous Emergency Response Operations

Lake County and all of the municipalities except Zion, Waukegan, and Park City had a complete shift change. Zion, Waukegan and Park City had a partial shift change. A full shift change should be demonstrated at all locations during the next exercise.

E.1. Adequacy of Procedures Used for Notif. of Emer. Response Organizations Including Means for Verification of Messages

The use of telephone as the primary means for notification of response organizations was adequately demonstrated at all locations except North Chicago where formal training in the alerting procedures is needed. Verification was demonstrated by means of call back. Backup notification systems should be demonstrated at a future exercise.

E.2. Adequacy of Procedures Used for Alerting, Notifying and Mobilizing Emergency Response Personnel

The primary notification system (telephone) in conjunction with written call lists was demonstrated. Call lists were generally up to date (with one exception - one number in Zion) and include both work and home numbers. At North Chicago, the call list was not activated in a timely fashion. Formal training is needed at North Chicago to ensure implementation of planned procedures. Backup procedures should be demonstrated during a future exercise.

C.2.a. If Appropriate, Timely Dispatch of a Representative to Licensee's Near-Site EOF

Not appropriate

F.1.a. Adequacy of Emergency Response Communications Equipment Used with Prompt Activation

The commercial telephone system used with prompt activation worked fine. Backup systems should be tested during a future exercise.

F.1.e. Adequacy of Communications Equipment Used for Alerting and Activating Emergency Response Personnel

Commercial telephones were used and worked fine. Some personnel carry pagers, which should be tested during some future exercise.

F.2. Capability to Communicate with Fixed and Mobile Medical Support Facilities

There was an adequate demonstration of a coordinated communications link, using radio, between the Victory Memorial Hospital and the Zion Fire and Rescue ambulance. Telephone is the only communications link between the Zion Nuclear Power Station and the hospital - there are no direct communications between the utility and the ambulance.

H.4. Demonstration of Timely and Efficient Activation and Staffing of EOCs and Other Facilities

Staffing of all facilities was timely. Some facilities were physically set up in advance for the exercise. At a future exercise, it would be advantageous to test the time needed for physical set-up of the facilities (phone hookups, arrangement of equipment, etc) at the local Emergency Operations Center. The Lake County facility is always set up and ready for activation.

SUMMARY III EMERGENCY OPERATIONS MANAGEMENT
(Organization, Control, Leadership, Support by Officials, Decision Making)

There was a demonstration of good emergency operations management in terms of leadership, organization, control of emergency operations and decision making. Senior elected officials were represented in each location.

A.1.a. Evidence That Specific Organizations Have Been Adequately Established as Part of Overall Response

There was an adequate demonstration that specific organizations have been established as part of the overall response in that there was a good cross-section of responsible government and other agency officials in the Emergency Operations Center.

A.1.d. Demonstration That a Specific Individual, by Title, was Effectively in Charge of Emergency Response

There was an adequate demonstration of a responsible individual being in charge of the emergency response in all instances.

A.2.a. Demonstration that Primary & Support Functions & Responsibilities Have Been Assigned to Specific Organizational Elements

There was a good showing that primary and support functions and responsibilities were assigned to specific organizational elements as demonstrated by the organizations represented within the Emergency Operations Center.

C.1.a. Evidence that a Specific Person Has Been Authorized to Request Federal Assistance (State Only)

Not observed - State only.

D.3. An Emergency Classification System was Effectively Used and was Consistent with that of the Utility

There was adequate evidence that the emergency classification system was effectively used and was consistent with that of the utility.

D.4. Adequate Written Procedures are Used for Emergency Actions Consistent with Facility RECC and Local Offsite Conditions

Written procedures for emergency actions are consistent with facility recommendations and local off-site conditions at all locations except Park City where they were missing.

- Demonstration of Effective Coord. Between Emergency Response Dir. & Staff, Thru Oral Briefings, Staff Meetings, Etc.

There was a good demonstration of effective coordination between the emergency response directors and staffs through oral briefings and meetings.

- Adequacy of Support and/or Participation by Elected Officials

Senior elected officials were present in the County and local Emergency Operations Centers. Park City officials need additional training in the conduct of emergency operations.

SUMMARY IV PUBLIC ALERTING & NOTIFICATION
(Means of Notification - Sirens, Vehicles, or Other Systems)

Lake County demonstrated a reliable system for dissemination of appropriate information to the public. This includes the preparation of instructional messages to the public.

The primary notification system consists of 14 115 dB sirens with a radius of 2,200 feet, 25 125 dB sirens with a radius of coverage of 4,100 feet. During the exercise, members of the evaluation team were positioned in the field to monitor the siren system.

E.5. Evidence of a Reliable System for Dissemination to the Public of Appropriate Info Received from the Licensee, e.g., EBS

The County demonstrated a reliable system for the dissemination of appropriate information to the public.

E.6. Adequacy of Means Used for Notification & Prompt Instruction to the Public in the Plume EPZ (Within 15 Minutes)

The primary notification system consists of 14 115 dB sirens with a radius coverage of 2,200 feet and 25 125 dB sirens with a radius coverage of 4,100 feet. During the exercise, three members of the evaluation team were positioned at the maximum effective hearing range of nine assigned sirens as indicated by the siren map provided by Commonwealth Edison. Sirens numbered 2,3,5, and 6 were heard. Sirens numbered 1 and 7 were heard, but in the opinion of the observers would not have been noticed had they not known the sirens were to be sounded. Sirens numbered 4 and 8 were not heard.

E.7. Effective Use of Instructional Messages for the Public in Affected Areas

The County demonstrated the adequate use of instructional messages to the public during this exercise.

J.10.c. Adequacy of Means Used for Notifying all Segments of Transient and Resident Population

This element was not observed during this exercise.

SUMMARY V PUBLIC AND MEDIA RELATIONS
(Publications, Press Facilities, Media Briefings, Release Coordination)

The County plan provides that the Board Chairman will be the media spokesperson. The County was represented at the Joint Public Information Center by a Public Information Officer. Releases were coordinated with the County Board Chairman.

G.1. Evidence of Dissemination of Information to the Public, Within the Last Year

Local hotels and restaurants checked by observers had the Commonwealth Edison brochures.

G.2. Evidence of a Public Info Program for Permanent & Transient Pop in the Plume EPZ, Such as Posted Notices, Etc.

The only evidence is the brochure. The brochure is mailed to residents of the 10 mile Emergency Planning Zone annually.

G.3.a. Appropriate Points of Contact for the Media Have Been Designated

The Zion Moose Lodge Hall has been designated as the Joint Public Information Center.

- Adequacy of Joint Media Facility, Where Appropriate

Not observed

- Adequacy of Issued Press Releases

Releases were coordinated with the County Board Chairman.

G.4.a. A Media Spokesperson Has Been Designated Who Has Access to All Necessary Information

The County plan provides that the Board Chairman will be the media spokesperson.

G.4.b. Adequacy of Arrangements for Exchange of Information Among Spokespersons

Not observed

G.4.c. Adequacy of Coordinated Arrangements for Rumor Control Measures

Not observed

SUMMARY VI ACCIDENT ASSESSMENT
(Staff & Field Operations, Monitoring, Equipment, Technical Calculations, Use of PAGs)

Accident assessment is a State responsibility and was not observed at the County level.

H.7. Adequacy of Offsite Radiological Monitoring Instruments

State responsibility. Not observed at the County level.

H.12. An Adequate Central Point Has Been Established for Receipt and Analysis of Field Monitoring Data and Sample Media

State responsibility. Not observed at the County level.

I.7. Adequacy of Capability and Resources for Field Monitoring Within the Plume EPZ

State responsibility. Not observed at the County level.

I.8. Adequate Capability to Make a Rapid Assessment of Magnitude & Location of Liquid or Gaseous Radiological Hazards

State responsibility. Not observed at the County level.

I.9 Capability for Measurement of Radioiodine Concentrations in Plume EPZ Under Field Conditions to 10 F-7 (State Only)

State responsibility. Not observed at the County level.

I.10. Capability for Relating Measured Parameters to Dose Rates and Estimated Integrated Doses (State Only)

State responsibility. Not observed at the County level.

I.11. Capability for Locating and Tracking Airborne Radioactive Plume with Aid of Federal and/or State Resources (State Only)

State responsibility. Not observed at the County level.

J.10.m. Capability to Recommend,Protective Action, Based on PAGs, in Plume EPZ (State Only)

State responsibility. Not observed at the County level.

C.3. Evidence of Availability & Capability of Radiological Laboratories (State Only)

State responsibility. Not observed at the County level.

SUMMARY VII ACTIONS TO PROTECT THE PUBLIC
(Sheltering, Evacuation, Reception & Care, Transportation)

There was an adequate demonstration of capabilities to protect the public through reception and care at the one reception center opened at the Antioch High School. There is a need for a more involved demonstration of evacuation and transportation procedures. This should be accomplished by an evacuation and transportation drill, utilizing a greater number of evacuees, more equipment, and more reception and sheltering areas.

J.2. Coordination with Utility for Movement of Onsite Individuals to Offsite Locations

Not observed

J.9. Capability for Implementation of Protective Measures

Not observed

J.10.d. Adequacy of Methods Used for Protecting Mobility Impaired Persons, Including Institutionally Confined

Not observed

J.10.g. Adequacy of Methods Used for Implementing Relocation of Populace

There was an adequate demonstration of methods to be utilized for implementing relocation of populace when a school bus and an ambulance were used to evacuate 27 Explorer Scouts and Civil Air Patrol members from the Illinois Beach State Park to the high school at Antioch.

J.10.k. Adequacy of Organizations Identification of and Means for Dealing with Potential Impediments to Evacuation

Not observed

J.11. Adequacy of Protective Measures in Ingestion EPZ, Including Dairy Facilities, Food Processing Plants, Etc. (State Only)

Not observed

J.10.h. Adequate Relocation Centers Have Been Established at Least 5 Miles & Preferably 10 Miles Outside the Plume EPZ

Adequate relocation centers have been established at least five miles outside the plume Emergency Planning Zone as depicted in the State plans.

- Adequacy of Facilities, Supplies & Equipment at Relocation and/or Mass Care Centers

The relocation center used during this exercise was the Antioch High School. The school was adequate in terms of space, cooking and eating facilities and utensils, recreation capabilities and sleeping accommodations if necessary.

- Adequacy of Staffing at Relocation and/or Mass Care Centers

There was adequate staffing at the Antioch High School reception center. The staffing consisted of an identifiable shelter manager, four (4) Department of Nuclear Safety radiological monitors, two (2) Red Cross Registrars, two (2) Red Cross Nurses and the regular school cafeteria staff.

J.12. Adequacy of Procedures for Processing Evacuees in Relocation Ctrs, Including Health Care, Decon & Rad Monitoring, Etc.

There was an adequate demonstration of procedures for processing evacuees in the relocation center at the Antioch High School. Their procedure included the identification and relocation information on the evacuees, monitoring of evacuees for contamination, decontamination facilities, health care evaluations and feeding.

SUMMARY VIII HEALTH, MEDICAL, AND EXPOSURE CONTROL MEASURES
(Access Control, Adequacy of Equipment, Use of KI)

The County and the minor civil divisions adequately demonstrated that health, medical and exposure control measures would be carried out. Potassium Iodide was available and provisions for its distribution were in place. Dosimetry was acceptable. However, additional pocket dosimeters should be obtained to replace the high range 0-200R devices now in use. A demonstration of decontamination of emergency workers and the transportation of a contaminated injured person was provided by the Victory Memorial Hospital and the Zion Fire and Rescue Department

J.10.e. Adequacy of Provisions for Use of KI for Emergency Workers and Institutionalized Persons in Plume EPZ

Potassium Iodide was available and provisions for its distribution are in place.

J.10.f. Adequacy of Methods Used in Making Decisions to Administer KI to Central Population

Not observed

J.10.j. Adequacy of Control of Access to Evacuated Areas

Not observed

K.3.a. Adequacy of a 24 Hour a Day Capability to Determine Dose Received by Emergency Workers

Dosimeters, TLDs, and CDV-742s were issued at all locals. However, an additional or replacement dosimeter is recommended for the CDV-742, which is an inappropriate device for most emergency workers.

K.3.b. Demonstration of Adequate and Frequent Emergency Worker Doseimeter Readings & Maintenance of Dosage Records

Adequate dosimeter readings were generally taken. However, reading should be taken at more frequent intervals at Zion and Gurnee.

K.4. Evidence that an Adequate Decision Chain Has Been Established to Authorize Exposure for Emer Workers in Excess of PAGs

An adequate decision chain has been established, but was not demonstrated during this exercise.

K.5.a. Evidence That Appropriate Action Levels Have Been Specified for Determining Need for Decontamination

At most of the local areas, the need for decontamination was not observed due to their location. At Zion, people entering the Emergency Operations Center were checked for contamination.

K.5.b. Adequacy of Measures for Decontamination of Emergency Personnel, Supplies, and Equipment, and for Waste Disposal

There was a demonstration of measures for decontamination of emergency personnel and for waste disposal by a Victory Memorial Hospital decontamination team. However, it was pointed out to hospital personnel participating in the exercise, during the exercise, by Dr. Roger Timmerman, consulting radiologist, Radiation Management Corporation, that the transfer procedures they were utilizing for patient movement from the decontamination unit to the inner hospital facility recontaminated the patient.

L.1. Adequate Capability Demonstrated by Local and/or Backup Hospital and Medical Services for Handling Personnel

Not observed

L.4. Adequate Capability Demonstrated for Transportation of Radiological Accident Victims to Medical Support Facilities

There was an adequate demonstration of patient transport from the Zion plant to the Victory Memorial Hospital by the Zion Fire and Rescue Department. It involved a plant worker that was injured and contaminated as a result of the incident at the plant.

M.4. Capability for Periodic Estimation of Total Population Exposure (State Only)

Not observed - State only.

SUMMARY IX RECOVERY AND REENTRY OPERATIONS
(Adequacy of Plans and Procedures)

A good demonstration of reentry and recovery was observed. A system for returning to normal living conditions was explained by the Department of Nuclear Safety and acted upon by County officials.

M.3. Adequacy of Established Means for Informing Response Org That Recovery and Reentry Can Be Initiated (State Only)

Not observed - State only.

M.1. Adequacy of Procedures Demonstrated for Reentry and Relaxation of Protective Measures Allowing Reentry

A good demonstration of reentry and recovery was observed. A system for returning to normal living conditions was explained by the Department of Nuclear Safety and acted upon by County officials. No one was allowed to leave the Emergency Operations Center until the final NARS message was received at 1645.

SUMMARY X RELEVANCE OF THE EXERCISE EXPERIENCE
(Benefit to Participants, Adequacy of the Scenario)

The scenario adequately tested the expertise and preparation of most of the players, the exception being those players in communities not in the plume. Most participants benefited from this exercise.

The scenario adequately tested the capability of the County Emergency Operations Center staff and the staffs of those communities in the plume to provide integrated response to a nuclear plant emergency. Communities not in the plume did not require the exercise of their full capability, (e.g., dosimetry, roadblocks, fire protection). Reentry was tested by this scenario at the County and to a limited extent in the communities.

The County, Zion and Winthrop Harbor participants benefited from a demonstration of their skills through numerous activities. Park City used this exercise as a drill to teach new members of their response team. The staff at Gurnee learned a better procedure as a result of the exercise.

N.1.b. Adequacy of Scenario to Test Capability to Mobilize State and Local Personnel and Resources

The scenario adequately tested the capability of the County Community Coordination Center to respond to a nuclear plant emergency. The scenario also tested the ability of the communities in the plume but did not require full mobilization (dosimetry, etc.) for many of the communities such as North Chicago, Waukegan and Gurnee.

N.1.a. Adequacy of Ex. to Test Integrated Capabilities & Major Portions of the Basic Existing Response Elements in Affected Org.

The exercise tested the capabilities of the County, Zion, Winthrop Harbor, and Park City. There was a minimum amount of activity at Waukegan, North Chicago and Gurnee. Reentry procedures were exercised by the scenario at the County level and to a lesser degree at the local level.

Benefit of Exercise to Participants

The exercise permitted the Lake County staff to sharpen their skills for responding to an incident at the Zion station. Park City used and needed the exercise as a training vehicle for an expanded staff. All of the participants at Zion benefited from the sense of a job extremely well done. The exercise was of minimal benefit to the players at North Chicago, Waukegan, and Gurnee because of the plume direction. The staff at Gurnee did develop a better system for coordinating NARS messages and communications with their representative at the Community Co-ordination Center.

STATE OF WISCONSIN

SUMMARY I EMERGENCY OPERATIONS FACILITIES AND RESOURCES
(Space, Internal Comm., Displays, Security)

Primary and backup communications systems at the State EOC and the Southeast Area EOC generally worked well, both with contiguous governments and with other emergency response organizations. The State EOC was a good facility although the accident assessment room was slightly cramped and its map of sampling points was inconsistent with Table J-1 of NUREG 0654. The Southeast Area EOC demonstrated a good communications facility despite initial failures of the microwave system and low band radio. The largest deficiency in this element was the internal EOC message handling procedures in Madison. They were overwhelmed with the great volume of messages resulting in the misplacing and delay of important information of almost an hour in one instance involving a recommended protective action. It is recommended that these procedures be improved.

The State mobile communications van was dispatched to Kenosha. The van was set up in the parking lot adjacent to the County Public Safety Building to provide additional communications capability between the County EOC, the Southeast Area EOC, the State EOC, and the field monitoring teams.

F.1.b. Adequacy of Communications Systems (Primary and Backup) with Contiguous State/Local Governments Within the EPZs

The primary and backup communication systems performed well, as did the people who operated them. The microwave system became temporarily inoperative as did the low band radio capability in the Southeast Area EOC. However, the facility was able to function and communicate via landlines and through the Wisconsin State Highway Patrol communication system. Microcomputer capability was used throughout the exercise to communicate with the State EOC. The capability exists for the EOC to use the State Highway Patrol backup communication facility. However, this system was not tested during this exercise.

F.1.c. Adequacy of Communications, as Appropriate, with Federal Emergency Response Organizations

Not observed

F.1.d. Adequacy of Communications Systems Between the Nuclear Facility and Near-Site EOF, and State and for Local EOCs

All communications were handled by landlines. A minor failure of the backup system for communications with the field teams occurred when the balloon carrying their radio antenna broke. However, the system worked well in practice.

C.1.c. Adequacy of Specific State or Local Resources Needed to Support Federal Response

Not observed

- Adequacy of EOC Working Space and Amenities

The separate accident assessment room was slightly cramped, but workable.

- Adequacy of EOC Internal Communications, Including Equipment, Displays, and Message-Handling Procedures

The sheer volume of messages overwhelmed the internal communications system in the State EOC. Even though the scenario was available to many of the EOC staff, confusion at key moments caused delay: at one point, a NARS message announcing an increase in the area to be sheltered was not acted on for nearly one hour. It is recommended that the message delivery system be revised to highlight these important messages and assure that they are recognized promptly. In the Southeast Area EOC, internal communications were good, but hard copy required a message runner to bring copies up and down stairs, which would have been hard to sustain in a real accident.

- Adequacy of EOC Security Measures

Not observed

H.3. Overall Adequacy of the Emergency Operating Center (EOC)

Not observed

J.10.a. Adequate Maps Displayed Showing Evacuation Routes, Sampling Points, Relocation Centers and Shelter Areas

In the accident assessment room, maps were displayed showing the sampling points for Wisconsin. However, the sample location numbering system was not consistent with NUREG 0654 Table J-1.

J.10.b. Adequate Maps Displayed Showing Population Distribution Near Nuclear Facility by Evacuation Areas

Not observed

SUMMARY II ALERTING AND MOBILIZATION OF OFFICIALS AND STAFF
(Staffing, 24-Hour Capability, Alerting Timeliness)

Alerting and Mobilization of the Wisconsin State and Southeast Area EOCs went well. An outstanding capability for 24 hour activation of emergency response organizations exist, but backup to commercial telephones is needed to assure prompt

SUMMARY II (Cont'd)

alerting of field monitoring teams located in Kenosha County. In addition, the pre-positioning of field teams should not have occurred. Finally, additional training of the second shift radiation coordinator would improve the capability of 24 hour operation of the accident assessment function.

A.1.e. Capability for 24-Hour Initial Emergency Response and Manning of Communications

Two fully-equipped warning stations (State Police) are capable of 24 hour response.

A.4. Capability for 24-Hour Continuous Emergency Response Operations

Because of the small scale of the exercise, the bulk of EOC operations did not demonstrate a shift change. The accident assessment team demonstrated a shift change. The backup (or 2nd shift) State radiation coordinator could be improved by additional training in the operation of the EOC.

E.1. Adequacy of Procedures Used for Notif. of Emer. Response Organizations Including Means for Verification of Messages

Given the small scale nature of the exercise, the Wisconsin EOC did an outstanding job in notifying and verifying.

E.2. Adequacy of Procedures Used for Alerting, Notifying and Mobilizing Emergency Response Personnel

Not observed

C.2.a. If Appropriate, Timely Dispatch of a Representative to Licensee's Near-Site EOF

Not observed

F.1.a. Adequacy of Emergency Response Communications Equipment Used With Prompt Activation

Two fully-equipped police warning stations are capable of 24 hour operation via general redundant systems.

F.1.e. Adequacy of Communications Equipment Used for Alerting and Activating Emergency Response Personnel

No backup to commercial telephones is available for alerting County field monitoring team members. Some means such as telephone pagers is recommended.

F.2. Capability to Communicate with Fixed and Mobile Medical Support Facilities

Not observed

H.4. Demonstrations of Timely and Efficient Activation and Staffing of EOCs and Other Facilities

Although about two hours are required for State teams to arrive from Madison, two teams stationed in Kenosha County can respond at once. The teams stationed in Kenosha County have one complete equipment kit and one that is more limited in scope. For this exercise, the Madison teams were prepositioned; in future exercises, the function should be demonstrated more realistically.

SUMMARY III EMERGENCY OPERATIONS MANAGEMENT
(Organization, Control, Leadership, Support by Officials, Decisionmaking)

Management of the Wisconsin State EOC was good. A Wisconsin representative at the EOF would be desirable. Briefings at the EOC should have included accident assessment personnel. The EOC itself was led very ably by the Division of Emergency Government Administrator.

Relations between Illinois and Wisconsin are a special problem requiring attention, because they constitute the only significant deficiency at the State level. On the occasion of both protection action recommendations, Illinois decided what to do without first consulting Wisconsin. Although the first instance of this (sheltering out to 2 miles and Sectors N, P, and Q out to 5 miles) did not include Wisconsin directly, the failure to involve Wisconsin here set a pattern that was repeated when the second protection action recommendation (sheltering Sectors N, P, and Q out to 10 miles) was made by Illinois without consulting Wisconsin, even though the recommendation included 2,200 Wisconsin citizens. A logical way to improve Wisconsin-Illinois coordination would be to rely on the State liaison present in each EOC and it is recommended that the plans be revised to provide for this.

A.1.a. Evidence That Specific Organizations Have Been Adequately Established as Part of Overall Response

To the extent of this small-scale exercise, organizations were well-established. It would have helped even for a limited exercise to place a Wisconsin representative in the EOF because important decisions there occurred (largely without Wisconsin input).

A.1.d. Demonstration That a Specific Individual, by Title, was Effectively in Charge of Emergency Response

The DEG Administrator was obviously and very effectively in charge. However, neither he nor his staff who play, even in a small-scale exercise, should have seen scenarios or have used them at the exercise. A small-scale exercise does require the State to demonstrate certain elements of NUREG 0654; this implies separate players and controllers.

A.2.a. Demonstration that Primary & Support Functions & Responsibilities Have Been Assigned to Specific Organizational Elements

Coordination between Illinois and Wisconsin needs improvement. Illinois did not consult Wisconsin prior to either of its protective action recommendations, the latter of which included sheltering people in Wisconsin. The plan should be revised to rely on the Illinois liaison in the Wisconsin EOC to maintain dose contact with Illinois specifically on issues involving protective action recommendations.

C.1.a. Evidence That a Specific Person Has Been Authorized to Request Federal Assistance (State Only)

Not observed

D.3. An Emergency Classification System Was Effectively Used and Was Consistent With That of the Utility

Not observed

D.4. Adequate Written Procedures are Used for Emergency Actions Consistent with Facility RECC and Local Offsite Conditions

Not observed

- Demonstration of Effective Coord. Between Emergency Response Dir. & Staff, Thru Oral Briefings, Staff Meetings, Etc.

Useful briefings occurred through the day, although they might have been more frequent in the afternoon. In addition, the presence of accident assessment personnel at each briefing, especially to give oral reports, would have been desirable. The lack of a DOH representative in the afternoon briefings left other EOC personnel out of touch with this essential function and presented DOH personnel from keeping up with the other organizations' activities.

- Adequacy of Support and/or Participation by Elected Officials

Not observed

IV. PUBLIC ALERTING AND NOTIFICATION
(Means of Notification - Sirens, Vehicles, or Other Systems, Timeliness)

Not observed

E.5. Evidence of a Reliable System for Dissemination to the Public of Appropriate Info Received from the Licensee, e.g., EBS

Not observed

E.6. Adequacy of Means Used for Notification & Prompt Instruction to the Public in the Plume EPZ (Within 15 Minutes)

Not observed

E.7. Effective Use of Instructional Messages for the Public in Affected Areas

Not observed

J.10.c. Adequacy of Means Used for Notifying all Segments of Transient and Resident Population

Not observed

SUMMARY V PUBLIC AND MEDIA RELATIONS
(Publications, Press facilities, Media Briefings, Release Coordination)

Although this element was not to be demonstrated at the State EOC as part of this exercise, Wisconsin showed an outstanding capability in this area. The PIOs sent frequent status reports by mini-computer to the JPIC. This gave the JPIC personnel the ability to rapidly convert these reports to press releases simply by editing the computer display.

G.1. Evidence of Dissemination of Information to the Public Within the Last Year

Not observed

G.2. Evidence of a Public Info Program for Permanent & Transient Pop in the Plume EPZ, Such as Posted Notices, Etc.

Not observed

G.3.a. Appropriate Points of Contact for the Media Have Been Designated

Not observed

- Adequacy of Joint Media Facility, Where Appropriate

Not observed

- Adequacy of Issued Press Releases

Not observed

G.4.a. A Media Spokesperson Has Been Designated Who Has Access to All Necessary Information

Not observed

G.4.b. Adequacy of Arrangements for Exchange of Information Among Spokespersons

Although this element was not to be demonstrated as part of this exercise, Wisconsin showed an outstanding capability in this area. The PIO's sent frequent status reports by mini-computer to the JPIC. This gave the JPIC personnel the ability to rapidly convert these reports to press releases simply by editing the computer display.

G.4.c. Adequacy of Coordinated Arrangements for Rumor Control Measures

Not observed

SUMMARY VI ACCIDENT ASSESSMENT
(Staff and field operations, monitoring, equipment, technical calculations, use of PAGs)

The State of Wisconsin has shown great improvements in the area of accident assessment in both field and staff operations. All deficiencies noted were minor. The staff personnel handled calculations well. The scenario was good in that no source term data was available and provided a good test for the accident assessment personnel. The second shift personnel could improve their performance with more training. The scenario did not provide releases high enough to warrant protective actions; therefore, all decisions were precautionary.

The field teams were well trained and well equipped. Several changes in the plan and additional training would improve performance, although the teams' present capability is acceptable. In addition, the County team should acquire permanent record dosimeters immediately.

H.7. Adequacy of Offsite Radiological Monitoring Instruments

Generally good. The Reuter-Stokes is quite bulky and hard to manage; a hand-held instrument would be more appropriate for field monitoring, i.e., Eberline PRM-5, SPA-2 probe or Eberline E-520, HP 260 probe and appropriate conversion chart. Calibration stickers need to be put on the instruments.

H.12. An Adequate Central Point Has Been Established for Receipt and Analysis of Field Monitoring Data and Sample Media

Wisconsin is currently preparing a mobile lab which will be used as a forward location for detailed analysis of field samples. The current procedure calls for transport by air of samples to the University of Wisconsin for analysis. The time delay inherent in this system will be corrected when the mobile van is completed.

I.7. Adequacy of Capability and Resources for Field Monitoring Within the Plume EPZ

Overall, Wisconsin has greatly improved their capability for field monitoring. The team was well trained and performed well. Several changes in the plan and additional training on these changes are needed. These are 1) take radiation readings at ground level and at some distance above to determine if in the plume or if it has passed; 2) sources should be available to check instrument operation before departure to field; 3) partial face respirators would be more appropriate due to the common occurrence of members with glasses; 4) permanent dosimeters should be available for the County members; 5) turnaround value should be established for field teams, i.e., a pre-selected dose rate at which the team leaves the area in order to avoid exposure.

I.8. Adequate Capability to Make a Rapid Assessment of Magnitude & Location of Liquid or Gaseous Radiological Hazards

Field monitoring teams functioned well and efficiently transmitted the data to the EOC. The exercise demonstrated gaseous releases only. Accident assessment staff at Madison was able to convert field data to dose projections and project doses to areas downwind where measurements were not made. Scenario was good in that no source term data was available from plant and the calculations required were more involved than if the source term was available. Second shift personnel could be improved with more training.

I.9. Capability for Measurement of Radioiodine Concentrations in Plume EPZ Under Field Conditions to 10 F-7 (State Only)

Radioiodine monitoring was done by placing a silver yeolite cartridge behind a particular filter in the sampler. The cartridge was measured with a G.M. the efficiency of which for Radioiodine had been determined from a cartridge spiked with a known amount of radioiodine. This is a great improvement over the last exercise.

I.10. Capability for Relating Measured Parameters to Dose Rates and Estimated Integrated Doses (State Only)

Calculations were made, initially by computer, and later by hand to assess a projected dose commitment. An error was found in the computer program and needs to be corrected.

I.11. Capability for Locating and Tracking Airborne Radioactive Plume with Aid of Federal and/or State Resources (State Only)

Not observed

J.10.m. Capability to Recommend, Protective Action, Based on PAGs, in Plume EPZ (State Only)

Protective action recommendations were based on PAGs; however, the scenario did not provide a release high enough to warrant protective actions. Therefore, all decision were precautionary.

C.3. Evidence of Availability & Capability of Radiological Laboratories (State Only)

Not observed

SUMMARY VII ACTIONS TO PROTECT THE PUBLIC
(Sheltering, evacuation, reception and care, transportation)

Not observed

J.2. Coordination with Utility for Movement of Onsite Individuals to Offsite Locations

Not observed

J.9. Capability for Implementation of Protective Measures

Not observed

J.10.d. Adequacy of Methods Used for Protecting Mobility Impaired Persons, Including Institutionally Confined

Not observed

J.10.g. Adequacy of Methods Used for Implementing Relocation of Populace

Not observed

J.10.k. Adequacy of Organizations Identification of and Means for Dealing with Potential Impediments to Evacuation

Not observed

J.11. Adequacy of Protective Measures in Ingestion EPZ, Including Dairy Facilities, Food Processing Plants, Etc. (State Only)

Not observed

J.10.h. Adequate Relocation Centers Have Been Established at Least 5 Miles & Preferably 10 Miles Outside the Plume EPZ

Not observed

- Adequacy of Facilities, Supplies, & Equipment at Relocation and/or Mass Care Centers

Not observed

- Adequacy of Staffing at Relocation and/or Mass Care Centers

Not observed

J.12. Adequacy of Procedures for Processing Evacuees in Relocation Ctrs, Including Health Care, Decon & Rad Monitoring, Etc.

Not observed

SUMMARY VIII HEALTH, MEDICAL, AND EXPOSURE CONTROL MEASURES
(Excess control, adequacy of equipment, dosimetry, use of KI)

Not observed

J.10.e. Adequacy of Provisions for Use of KI for Emergency Workers and Institutionalized Persons in Plume EPZ

Not observed

J.10.f. Adequacy of Methods Used in Making Decisions to Administer KI to Central Population

Not observed

J.10.j. Adequacy of Control of Access to Evacuated Areas

Not observed

K.3.a. Adequacy of a 24 Hour A Day Capability to Determine Dose Received by Emergency Workers

Not observed

K.3.b. Demonstration of Adequate and Frequent Emergency Worker Dosimeter Readings & Maintenance of Dosage Records

Not observed

K.4. Evidence That an Adequate Decision Chain Has Been Established to Authorize Exposure for Emer Workers in Excess of PAGs

Not observed

K.5.a. Evidence That Appropriate Action Levels Have Been Specified for Determining Need for Decontamination

Not observed

K.5.b. Adequacy of Measures for Decontamination of Emergency Personnel, Supplies, and Equipment, and for Waste Disposal

Not observed

L.1. Adequate Capability Demonstrated by Local and/or Backup Hospital and Medical Services for Handling Personnel

Not observed

L.4. Adequate Capability Demonstrated for Transportation of Radiological Accident Victims to Medical Support Facilities

Not observed

M.4. Capability for Periodic Estimation of Total Population Exposure (State Only)

SUMMARY IX RECOVERY AND REENTRY OPERATIONS
(Adequacy of plans and procedures)

Not observed

M.3. Adequacy of Established Means for Informing Response Org that Recovery and Reentry Can Be Initiated (State Only)

Not observed

M.1. Adequacy of Procedures Demonstrated for Reentry and Relaxation of Protective Measures Allowing Reentry

Not observed

SUMMARY X RELEVANCE OF THE EXERCISE EXPERIENCE
(Benefit to participants, adequacy of the scenario)

The exercise was beneficial to participants in accident assessment activities, testing capabilities and, in essence, providing training. The scenario did not test the "limits" of Wisconsin's accident assessment capability due to the low release levels and constant wind direction. However, the Wisconsin State EOC demonstrated a clear capability to protect the public in the event an accident occurs at the Zion Nuclear Station.

N.1.b. Adequacy of Scenario to Test Capability to Mobilize State and Local Personnel and Resources

The scenario did mobilize State and local personnel.

N.1.a. Adequacy of Ex. to Test Integrated Capabilities & Major Portions of the Basic Existing Response Elements in Affected Org

The scenario did not provide releases high enough to fully test the capability of the field teams or staff personnel. The wind shift which was planned but not implemented and higher releases would have more thoroughly tested field monitoring and staff performance and decision-making capabilities.

- Benefit of Exercise to Participants

Accident assessment - one of the key personnel had knowledge of the scenario. In future exercises, use of controllers would allow a clear distinction between players and non-players. More significant releases would be a better test of capability.

STATE OF WISCONSIN

KENOSHA COUNTY

SUMMARY I EMERGENCY OPERATIONS FACILITIES AND RESOURCES
(Space, internal comm., displays, security)

The EOC, considering construction still to be completed and equipment to be installed, is quite an adequate facility. Backup communications for the landline systems are scheduled to be installed in February. Some means for dampening or controlling the noise level is desirable.

F.1.b. Adequacy of Communications Systems (Primary and Backup) with Contiguous State/Local Governments Within the EPZs

Primary communication is by landline. A new dispatch center is being installed in the EOC and when completed will provide complete radio communications with the State and adjacent Counties. The State mobile radio van was stationed in the parking lot adjacent to the EOC.

F.1.c. Adequacy of Communications, as Appropriate, with Federal Emergency Response Organizations

Not applicable

F.1.d. Adequacy of Communications Systems Between the Nuclear Facility and Near-Site EOF, and State and for Local EOCs

Landline communication on NAWAS and NARS is utilized for initial communications between the utility and the State and County EOCs.

C.1.c. Adequacy of Specific State or Local Resources Needed to Support Federal Response

Not applicable

- Adequacy of EOC Working Space and Amenities

The working space and amenities (furniture, space, lighting, ventilation) were very good. The communications center is in a room off the main operations room, which helps cut down on noise. Still due to the large number of people in the main room, noise control was sometimes a problem.

- Adequacy of EOC Internal Communications, Including Equipment, Displays, and Message-Handling Procedures

Status boards for city situations, County situations, general status radiological data and congregate care/shelterings were kept promptly updated. Incoming/outgoing message forms and

logs were used and distributed within the EOC, generally satisfactorily. Some minor difficulties in recording of messages were noted, e.g., radiation readings in "micro-roentgens" and evacuee monitoring with "dosimeters." Phones for operational staff were "trunk seeking" causing calls to be misdirected. Recommend extensions from normal departmental phones be located in the EOC.

- Adequacy of EOC Security Measures

A guard was posted at the door and a sign-in procedure was in effect. All participants were required to show photo identification before receiving a numbered badge. A monitor was in place at the other end of the hall (leading to the rest of the building).

H.3. Overall Adequacy of the Emergency Operating Center (EOC)

The EOC, considering construction still to be completed and equipment to be installed, is quite an adequate facility.

J.10.a. Adequate Maps Displayed Showing Evacuation Routes, Sampling Points, Relocation Centers and Shelter Areas

All necessary maps were posted. The maps were excellent and easily visible to all EOC personnel.

J.10.b. Adequate Maps Displayed Showing Population Distribution Near Nuclear Facility by Evacuation Areas

Maps showing population distribution were posted in the EOC.

SUMMARY II ALERTING AND MOBILIZATION OF OFFICIALS AND STAFF
(Staffing, 24-hour capability, alerting timeliness)

The EOC was staffed promptly and effectively. Key operations personnel were present within several minutes of being alerted. Most service chiefs were present within 30 minutes and the EOC was fully staffed within 45 minutes. Primary alerting communications were by landline. Some delays were encountered when the person in the EOC making calls had to stop and answer other telephones.

A.1.e. Capability for 24-Hour Initial Emergency Response and Manning of Communications

Initial emergency response and communications are handled by the professional dispatchers in the Sheriff's 24-hour communications center.

E.1. Adequacy of Procedures Used for Notif. of Emer. Response Organizations Including Means for Verification of Messages

The EOC was staffed promptly and efficiently. A written up-to-date call list was used. Staffing was completed by approximately 9:00 a.m. The person making the "contact" calls was slightly delayed by having to answer other phones.

E.2. Adequacy of Procedures Used for Alerting, Notifying and Mobilizing Emergency Response Personnel

Service chiefs at the EOCs promptly notified their agencies and mobilized field personnel to prepare to meet possible emergency response/needs. Consideration should be given to having this function performed by persons in the communications center.

C.2.a. If Appropriate, Timely Dispatch of a Representative to Licensees Near-Site EOF

Not observed

F.1.a. Adequacy of Emergency Response Communications Equipment Used with Prompt Activation

Primary communication was by landline. New dispatch centers are being equipped in the public safety building and the EOC and when completed will provide adequate emergency response communications capability.

F.1.e. Adequacy of Communications Equipment Used for Alerting and Activating Emergency Response Personnel

See above.

F.2. Capability to Communicate with Fixed and Mobile Medical Support Facilities

See above.

H.4. Demonstration of Timely and Efficient Activation and Staffing of EOCs and Other Facilities

Key operations personnel were present within several minutes of being alerted; most service chiefs were present within 30 minutes; the EOC was fully staffed within 45 minutes.

SUMMARY III EMERGENCY OPERATIONS MANAGEMENT
(Organization, control, leadership, support by officials, decisionmaking)

An excellent demonstration of emergency operations management, organization, control, leadership, support by officials and decisionmaking was shown during this exercise.

A.1.a. Evidence that Specific Organizations Have Been Adequately Established as Part of Overall Response

As designated in the County Plan, those organizations that have been assigned emergency response functions promptly staffed the EOC.

A.1.d. Demonstration That a Specific Individual, by Title, was Effectively in Charge of Emergency Response

The County Executive, as designated in the plan, was effectively in charge.

A.2.a. Demonstration that Primary & Support Functions & Responsibilities Have Been Assigned to Specific Organizational Elements

The exercise adequately demonstrated that specific organizations have been assigned specific support functions.

C.1.a. Evidence that a Specific Person Has Been Authorized to Request Federal Assistance (State Only)

State only - not observed

D.3. An Emergency Classification System was Effectively Used and was Consistent with that of the Utility

The system was effectively used. There was no confusion when there was a change in classification. A definition of the emergency classification level was posted at two places in the operations room. The classification system was consistent with that used by the utility.

D.4. Adequate Written Procedures are Used for Emergency Actions Consistent with Facility RECC and Local Offsite Conditions

Several copies of the County Plan and SOPs were available in the EOC. Service chiefs were explicitly directed to implement their SOPs at the Site Emergency and General Emergency announcements.

- Demonstration of Effective Coord. Between Emergency Response Dir. & Staff, Thru Oral Briefings, Staff Meetings, Etc

Effective coordination was demonstrated by regular oral briefings. Second shift personnel were briefed before assuming duty.

- Adequacy of Support and/or Participation by Elected Officials

The Mayor, County Board Chairman and Pleasant Prairie Town Chairman were present on their assigned shifts.

SUMMARY IV PUBLIC ALERTING AND NOTIFICATION
(Means of notification - sirens, vehicles, or other systems, timeliness)

Sirens were sounded at the appropriate time. The Sheriff and Fire Departments are responsible for notifying those segments of the population not reached by fixed sirens. These mobile sirens were activated in the Pleasant Prairie area. In other areas, this activity was simulated. Members of the evaluation team were able to monitor the siren activation.

E.5. Evidence of a Reliable System for Dissemination to the Public of Appropriate Info Received from the Licensee, e.g., EBS

The PIO at the EOC was in regular communication with local broadcast media to disseminate general information. Radio Station WLIP 1050 was making regular comments on the exericse and had coverage of the exercise during regularly scheduled newscasts.

E.6. Adequacy of Means Used for Notification & Prompt Instruction to the Public in the Plume EPZ (Within 15 Minutes)

Primary notification system consists of 3-115 db sirens with a radius of coverage of 2,200 feet, 16-125 db sirens with a radius of coverage of 5,100 feet. During the exercise, a member of the observation team was positioned at the maximum effective hearing range of four sirens as indicated by the siren map furnished by Commonwealth Edison. Sirens number 15 and 16 were heard; sirens number 14 and 17 were not heard.

E.7. Effective Use of Instructional Messages for the Public in Affected Areas

Messages conveyed to the media by the PIO were accurate and adequately informative. All messages were cleared with the JPIC.

J.10.c. Adequacy of Means Used for Notifying all Segments of Transient and Resident Population

The County Sheriff and Fire Departments are responsible for notifying those segments of the population not included by fixed sirens. These mobile sirens were activated in the Pleasant Prairie area. In other areas their activity was simulated.

SUMMARY V PUBLIC AND MEDIA RELATIONS
(Publications, press facilities, media briefings, release coordination)

The County should have been represented at the JPIC. A PIO was present in the EOC at all times. Information was regularly received from the JPIC and information to be released was first

SUMMARY V (Cont'd) cleared with the JPIC. Radio Station WLIP covered the exercise during regularly scheduled news programs and at other times during their broadcast day.

G.1. Evidence of Dissemination of Information to the Public, Within the Last Year

Local motels and restaurants checked by observers had the Commonwealth Edison brochures.

G.2. Evidence of a Public Info Program for Permanent & Transient Pop in the Plume EPZ, Such as Posted Notices, Etc.

The only evidence is the brochure. The brochure is mailed to residents of the 10 mile emergency planning zone annually.

G.3.a. Appropriate Points of Contact for the Media Have Been Designated

The Zion Moose Lodge Hall has been designated as the Joint Public Information Center.

- Adequacy of Joint Media Facility, Where Appropriate

Not observed

- Adequacy of Issued Press Releases

While the PIO was not at the JPIC, press releases were clear and accurate. The PIO cleared news releases with the JPIC before issuing it to the media.

G.4.a. A Media Spokesperson Has Been Designated Who Has Access to All Necessary Information

The designated PIO was present at all times. This person had access to all information and had his own phone line. Making contact with local media by separate phone calls may result in delays under real emergency conditions.

G.4.b. Adequacy of Arrangements for Exchange of Information Among Spokespersons

The County should have been represented at the JPIC. However, information was regularly received from the JPIC and information to be released was first cleared with the JPIC.

G.4.c. Adequacy of Coordinated Arrangements for Rumor Control Measures

Not observed

SUMMARY VI ACCIDENT ASSESSMENT
(Staff and field operations, monitoring, equipment, technical calculations, use of PAGs)

This activity was not observed.

H.7. Adequacy of Offsite Radiological Monitoring Instruments

Not observed

H.12. An Adequate Central Point Has Been Established for Receipt and Analysis of Field Monitoring Data and Sample Media

Not observed

I.7. Adequacy of Capability and Resources for Field Monitoring Within the Plume EPZ

Not observed

I.8. Adequate Capability to Make a Rapid Assessment of Magnitude & Location of Liquid or Gaseous Radiological Hazards

Not observed

I.9. Capability for Measurement of Radioiodine Concentrations in Plume EPZ Under Field Conditions to 10 F-7 (State Only)

I.10. Capability for Relating Measured Parameters to Dose Rates and Estimated Integrated Doses (State Only)

Not observed

I.11. Capability for Locating and Tracking Airborne Radioactive Plume with Aid of Federal and/or State Resources (State Only)

Not observed

J.10.m. Capability to Recommend, Protective Action, Based on PAGs, in Plume EPZ (State Only)

Not observed

C.3. Evidence of Availability & Capability of Radiological Laboratories (State Only)

Not observed

SUMMARY VII ACTIONS TO PROTECT THE PUBLIC
(Sheltering, evacuation, reception and care, transportation)

Service chiefs directed their respective agencies to carry out appropriate actions to implement sheltering and evacuation. Social services personnel contacted hospitals and nursing homes to confirm the number of individuals requiring emergency transportation. Mobility impaired individuals not in institutions must call the EOC if they need transportation assistance.

J.2. Coordination with Utility for Movement of Onsite Individuals to Offsite Locations

Not observed

J.9. Capability for Implementation of Protective Measures

Service chiefs directed their respective agencies to carry out appropriate actions to implement evacuation and sheltering.

J.10.d. Adequacy of Methods Used for Protecting Mobility Impaired Persons, Including Institutionally Confined

Social services personnel contacted hospitals and nursing homes to confirm the number of individuals requiring emergency transportation. However, mobility impaired and individuals not in institutions must call the EOC if they need transportation assistance.

J.10.g. Adequacy of Methods Used for Implementing Relocation of Populace

Relocation was not officially exercised.

J.10.k. Adequacy of Organizations Identification of and Means for Dealing with Potential Impediments to Evacuation

County highway crews were available to remove impediments to evacuation. Removal of impediments was effectively directed in the EOC, however, no demonstrations were observed.

J.11. Adequacy of Protective Measures in Ingestion EPZ, Including Dairy Facilities, Food Processing Plants, Etc. (State Only)

Not observed - State only.

J.10.h. Adequate Relocation Centers Have Been Established at Least 5 Miles & Preferably 10 Miles Outside the Plume EPZ

Relocation centers adequate to accommodate the expected evacuees have been identified outside the twenty mile ring.

- Adequacy of Facilities, Supplies & Equipment at Relocation and/or Mass Care Centers

Not observed

- Adequacy of Staffing at Relocation and/or Mass Care Centers

Not observed

J.12. Adequacy of Procedures for Processing Evacuees in Relocation Ctrs, Including Health Care, Decon & Rad Monitoring, Etc.

Not observed.

SUMMARY VIII HEALTH, MEDICAL, AND EXPOSURE CONTROL MEASURES
(Excess control, adequacy of equipment, dosimetry, use of KI)

Direction was given from the EOC, for distribution of dosimeters to emergency workers and for emergency workers to read their instruments. This activity was simulated. Available dosimeters are high range only. Emergency workers, particularly those at the reception center do not understand what a dosimeter is and how it is used. These people, and probably all emergency field staff, need continuous training on the effects of radiation, decontamination and the use of dosimetry.

J.10.e. Adequacy of Provisions for use of KI for Emergency Workers and Institutionalized Persons in Plume EPZ

Not observed

J.10.f. Adequacy of Methods Used in Making Decisions to Administer KI to Central Population

Not observed

J.10.j. Adequacy of Control of Access to Evacuated Areas

Direction was given from the EOC to establish traffic control points at key highway locations. No demonstration was observed.

K.3.a. Adequacy of a 24 Hour A Day Capability to Determine Dose Received by Emergency Workers

Direction was given from the EOC for distribution of dosimeters to emergency workers and for emergency workers to read their dosimeters. This activity was simulated. The available dosimeters were high range only.

K.3.b. Demonstration of Adequate and Frequent Emergency Worker Dosimeter Readings & Maintenance of Dosage Records

Emergency workers, particularly those at the Reception Center, do not understand what a dosimeter is and how it is used - these people, and probably all emergency field staff, need continuous training on the effects of radiation, decontamination and dosimetry.

K.4. Evidence That an Adequate Decision Chain Has Been Established to Authorize Exposure for Emer Workers in Excess of PAGs

Not observed

K.5.a. Evidence That Appropriate Action Levels Have Been Specified for Determining Need for Decontamination

Not observed

K.5.b. Adequacy of Measures for Decontamination of Emergency Personnel, Supplies, and Equipment, and for Waste Disposal

Not observed

L.1. Adequate Capability Demonstrated by Local and/or Backup Hospital and Medical Services for Handling Personnel

Not observed

L.4. Adequate Capability Demonstrated for Transporation of Radiological Accident Victims to Medical Support Facilities

Not observed

M.4. Capability for Periodic Estimation of Total Population Exposure (State Only)

Not observed - State only.

SUMMARY IX RECOVERY AND REENTRY OPERATIONS
(Adequacy of plans and procedures)

Timely direction was given from the EOC for the closing down of field operations and the recalling of personnel.

M.3. Adequacy of Established Means for Informing Response Org That Recovery and Reentry Can Be Initiated (State Only)

Not observed - State only.

M.1. Adequacy of Procedures Demonstrated for Reeentry and Relaxation of Protective Measures Allowing Reentry

Timely direction was given from the EOC for the closing down of the field operations and recalling of personnel.

SUMMARY X RELEVANCE OF THE EXERCISE EXPERIENCE
(Benefit to participants, adequacy of the scenario)

The exercise was beneficial to the participants. Because this was the third exercise during normal business hours for most of the participants, recommend that future exercises be conducted during off hours, emphasizing evacuation and reentry procedures and involve second and third line personnel to increase the depth of the community response staff.

SUMMARY X (Cont'd)

The scenario did not impact on the State of Wisconsin and particularly on Kenosha County; therefore, it did not require extensive operations by either the State or the County.

During this exercise the public officials and emergency staff of Kenosha County demonstrated an adequate capability to protect the population of the County from the effects of an accident at the Zion Nuclear Generating Station.

N.1.b. Adequacy of Scenario to Test Capability to Mobilize State and Local Personnel and Resources

The scenario tested the capability of the County to mobilize personnel and resources. The exercise was conducted during normal business hours. Recommend that additional exercises be conducted during other time periods.

N.1.a. Adequacy of Ex. to Test Integrated Capabilities & Major Portions of the Basic Existing Response Elements in Affected Org

The exercise effectively tested the capability of the County response elements, except for those dealing with evacuation and reentry.

- Benefit of Exercise to Participants

This was the third exercise for most of the EOC staff and it served to sharpen their response procedures. Recommend that second and third line personnel be used in future exercises to increase the depth of the community response staff.

PART IV

SUMMARY LISTING OF SIGNIFICANT DEFICIENCIES

STATE OF ILLINOIS

No significant deficiencies were noted at the State level during this exercise.

LAKE COUNTY

No significant deficiencies were noted at the County level during this exercise.

STATE OF WISCONSIN

No significant deficiencies were noted at the State level during this exercise.

KENOSHA COUNTY

No significant deficiencies were noted at the County level during this exercise.

PART V

SUMMARY LISTING OF MINOR DEFICIENCIES

STATE OF ILLINOIS

PLANS

M.3 There was a failure on the part of the DNS to collect for analysis, the necessary liquid and solid samples. The only samples processed were five (5) swipe samples. The decision for recovery and reentry was based on these five (5) samples. Recommend the plan be revised to require liquid and solid samples.

A.2.a Primary responsibilities demonstrated were adequate. The support responsibilities reflect a discontinuity in the CAP contribution. Additional guidance needs to be prepared defining the role of the CAP.

Coordination between Illinois and Wisconsin needs improvement. Illinois did not consult with Wisconsin prior to issuing eight of its protective action recommendations even though the latter included the sheltering of people in Wisconsin. The plan should be revised to provide for closer liaison between the States.

H.12 There is no clearly established site for the storage and isolation of samples which need to be retained for further analysis or for special disposal.

F.1.b While the communications systems appeared to function well, there were isolated instances where some information was not properly coordinated. The primary instance recognized by the evaluators was at the DNS mobile laboratory where analysis of samples were sent only to the REAC Command.

TRAINING

A.1.a The CAP at the State Regional office need specific assignments to assist in a more effective coordinated response effort.

A.4 More personnel need to be trained in the operation of the Gamma spectometry system to increase the 24-hour operational capability. More training is also required on the use and operation of the multi-channel analyzer.

G.4.b The release of certain information was not timely. Coordination between states must be improved.

I.8 The capability to measure radioactivity in liquids and solids will be strengthened when new laboratory and field personnel become familiar with their equipment.

I.9 Because of new equipment and personnel, this capability was not fully demonstrated. More training is required.

J.10.e The evaluation team felt the instructions to administer Potassium Iodide was premature as it was not detected off-site. The response, to the instruction to administer KI, was spotty. Some locations within the hazard area directed the use of KI, others did not.

J.11 The evaluation team felt that the protective actions recommended for the public within 2-5 miles of the plant was too conservative based on the calculated iodine concentration.

M.4 The capability to calculate population dose was not demonstrated. This is especially important when people are sheltered rather than evacuated.

N.1.a The scenario did not adequately test the recovery and reentry planning and post-accident operation of the State plan.

RESOURCES

A.1.e There is no adequately trained radio operator/dispatcher assigned to the ESDA van at the Forward Command Post.

G.1 Local hotels and restaurants that were checked had information brochures. It was reported that the brochures had been mailed to residents of the 10-mile EPZ within 12 months. The information in the brochure is extracted from other publications and contains material that pertains to the Quad Cities area. This must be corrected at once.

G.2 The Commonwealth Edison brochure meets a portion of this criteria. However, members of the evaluation team were not shown nor were they able to find any signs or posted notices in gasoline stations, phone booths, or other locations to alert or direct transients that were on the move.

H.7 Shielding for the multi-channel analyzer would aid its sensitivity.

I.7 Shielding for the multi-channel analyzer would aid its sensitivity.

J.10.a The congregate care center at the State Regional Office needs more detail in relation to the location of the centers.

J.10.b While maps were available they were not displayed or used during this exercise.

K.3.b The DNS has issued dosimeters for use during an incident to the ESDA staff. ESDA staff were unable to locate their dosimeters during this exercise.

LAKE COUNTY

PLANS

No deficiencies were noted during the exercise relating to the organization or content of the Lake County plan.

TRAINING

A.4 Lake County and all of the municipalities except Zion, Waukegan, and Park City had a full shift change. Zion, Waukegan, and Park City had a partial shift change. A full shift change should be demonstrated at all locations during the next exercise.

E.1 North Chicago personnel need formal training in the alerting procedures.

E.2 The primary notification system (telephones) was demonstrated during this exercise. The backup system should be demonstrated during a future exercise.

F.1.b Primary and backup communications systems at the Lake County CCC, Zion, Gurnee, Waukegan, Winthrop Harbor, and Park City were good. The backup system for North Chicago should be tested during an exercise.

H.4 Some facilities were physically set up in advance for the exercise. Set up time for local EOCs should be tested during future exercises.

J.10.a Maps showing evacuation routes, relocation centers, sheltering areas were not displayed at the Lake County CCC. Waukegan needs to post maps for shelter/relocation centers. North Chicago needs to post maps showing relocation centers. Gurnee and Zion should post maps showing relocation centers.

J.10.b Maps showing population distribution by evacuation areas were not displayed at the Lake County CCC. Zion did not have population density maps displayed in the Emergency Operations Center.

K.3.b Generally, adequate dosimeter readings were taken. Readings should be taken more frequently at Zion and Gurnee.

K.5.b Procedures for the movement of contaminated/decontaminated patients at Victory Memorial Hospital need improvement.

RESOURCES

F.2 Telephone is the only communication link between Zion nuclear power station and Victory Memorial Hospital. There are no direct communications links between the utility and the ambulance.

J.10.g There is a need for a more extensive demonstration of evacuation and transportation procedures involving more people and equipment.

K.3.a Dosimeters, TLDs, and CDV 742s were issued at all locals. An additional or replacement dosimeters is recommended for the CDV-742 which is an inappropriate device for most emergency workers.

STATE OF WISCONSIN

PLANS

A.2.a Coordination between Illinois and Wisconsin needs improvement. The plan should be revised to provide for closer liaison between the States.

I.7 Several changes in the plan and additional training on these changes are needed. Radiation readings should be taken at ground level and at some distance above ground to determine if the plume is still present or has passed. Sources should be available to check instrument operation before departure to the field. Partial face respirators would be more appropriate due to the common occurrence of team members with glasses. Permanent dosimeters should be available for the County team members. A turnaround value should be established for field teams, i.e.: a preselected dose rate at which the team leaves the area in order to avoid exposure.

J.10.a The numbering system on the sampling point maps in the accident assessment room are not consistent with NUREG-0654 table J-1.

TRAINING

A.4 The backup (second shift) radiation coordinator would benefit from additional experience in EOC operations.

E.6 Although the sirens were sounded 15 minutes after verification of the General Emergency status, the actual status change occurred 10 minutes earlier. In future exercises, Wisconsin should strive for faster verification of this critical message.

H.4 During a future exercise, the actual deployment of the Madison based field teams should be demonstrated.

I.8 The second shift performance would be improved with additional training and experience.

I.10 An error was found in the computer program used to assess the projected dose commitment. This error needs to be corrected.

N.1.a The scenario did not test the "limits" of Wisconsin's accident assessment capability due to the low release levels and constant wind direction.

A.1.a The State should be represented at the EOF.

F.1.d A more reliable system for supporting the antenna for the field monitoring team's radio needs to be developed.

F.1.e Commercial telephone is used for alerting the field monitoring teams residences in Kenosha County. There is no backup system. A backup system such as pagers needs to be developed.

H.7 The Reuter-Stokes is quite bulky and hard to manage when doing field monitoring. A hand held instrument would be more appropriate for this use.

Calibration stickers need to be put on the instrument.

H.12 Wisconsin is currently preparing a mobile laboratory which will be used as a forward location for detailed analysis of field samples. The current procedure calls for air transport of samples to the University of Wisconsin, at Madison, for analysis. The time delay inherent in the present system will be corrected when the mobile van is completed.

WISCONSIN

KENOSHA COUNTY

PLANS

E.2 Consideration should be given to having the alerting, notification, and mobilization of emergency response personnel handled by personnel in the dispatch center. This would release the CDD and his secretary of this duty and free them to begin emergency operations.

J.10.d Lists should be prepared of mobility impaired persons living in the EPZ that would require public transportation in event of evacuation.

TRAINING

J.10.c The County Sheriff and fire departments are responsible for notifying those segments of the population not reached by fixed sirens. These mobile sirens were activated in the Pleasant Prairie area and simulated in other areas. The full warning capability should be demonstrated during the next exercise.

K.3.a Direction was given from the EOC for the distribution of dosimeters to emergency workers and for emergency workers to read their dosimeters. These activities were simulated. The distribution and utilization of dosimeters should be demonstrated during the next exercise.

Observers believe that only high range dosimeters were available for distribution to emergency workers.

K.3.b Emergency workers, particularly those at the reception center, do not understand what a dosimeter is and how it is used. These people, and probably all emergency field staff, need continuous training on the effects of radiation, procedures for decontamination, and the use of dosimetry.

N.1.b This was the third exercise for Kenosha County personnel during normal business hours. Recommend that a future exercise be held during an off-hour period.

RESOURCES

F.1.a The primary communications system with the EOC was land line. Secondary radio communications systems were not in the EOC. New central dispatch centers are being equipped in the Public Safety Building and the EOC. When completed, these will provide adequate emergency response communication capability.

F.1.b The primary communications system with the EOC was land line. Secondary radio communications systems were not in the EOC. New central dispatch centers are being equipped in the Public Safety Building and the EOC. When completed, these will provide adequate emergency response communication capability.

F.1.d Land line communications, NAWAS and NARS, are used for initial communications between the utility and the county. There is no non-land line backup system. Consideration should be given to providing a radio backup to NAWAS/NARS.

F.1.e The primary communications system with the EOC was land line. Secondary radio communications systems were not in the EOC. New central dispatch centers are being equipped in the Public Safety Building and the EOC. When completed, these will provide adequate emergency response communication capability.

F.2 The primary communications system with the EOC was land line. Secondary radio communications systems were not in the EOC. New central dispatch centers are being equipped in the Public Safety Building and the EOC. When completed, these will provide adequate emergency response communication capability.

G.4.a A backup communications system to the land line used to contact the local media might be required during periods of emergency.

G.4.b The County should have a spokesperson in the JPIC.

PART VI

SCHEDULE FOR CORRECTION OF SIGNIFICANT DEFICIENCIES

No significant deficiencies were noted during this exercise for Illinois and Lake County Emergency Services and Disaster Agencies and Wisconsin and Kenosha County Division of Emergency Governments.

Federal Emergency Management Agency

Region V 300 South Wacker, 24th Floor, Chicago, IL 60606 (312) 353-1500

APR 2 7 1982

MEMORANDUM FOR: Assistant Associate Director, Office of Natural and Technological Hazards

FROM: Acting Chief, Technological Hazards Branch

SUBJECT: Final Report - Zion Site-Specific Off-Site Re-Exercise, Wisconsin/Kenosha County, October 7, 1981

Attached is the Zion (Wisconsin/Kenosha County) Final Report. The report follows the guidance prescribed in the April 5, 1982, memorandum, regarding REP Exercise Evaluation Reports. Also attached is the scenario of the October 7, 1981, re-exercise.

This report will become a part of the "Regional Director's Evaluation" (350 submission).

Edwin W. Hakala
Acting Chief
Technological Hazards Branch

Attachments

APR 2 7 1982

Joseph LaFleur, Administrator
Wisconsin Division of Emergency
Government
4802 Sheboygan Avenue
Madison, Wisconsin 53702

Dear Mr. LaFleur:

Previously you were provided "Exercrit Composites" with a summary of findings pertaining to the Zion site-specific off-site re-exercise of October 7, 1981. This format has been superseded by a new and different reporting format.

To better facilitate the dissemination of findings, the evaluation of the exercise has been rewritten in the new format at the request of our National Office. Enclosed is the the "Final Report" for the Zion site-specific off-site re-exercise of October 7, 1981.

We received your letter of corrective actions pertaining to the Zion deficiencies. We need additional information to determine the level of adequacy in protecting the public.

Please provide the following information for each of the significant deficiencies listed in Part IV of the enclosure: A statement of corrective action taken (State/County) for each deficiency and the date the action was completed; or, the projected date for completion of corrective action for each deficiency.

Sincerely yours,

Edwin W. Hakala
Acting Chief
Technological Hazards Branch

Enclosure

cc: RD
Mr. Finch
Megs Hepler, Natl

TH/GLWenger/pr/x6011/4-26-82/Ref: REP-Zion (WI)

PART I

FINAL REPORT

Zion Nuclear Power Station

Re-exercise

Wisconsin/Kenosha County (Small-Scale)

October 7, 1981

Supplement to

Zion Nuclear Power Station Exercise
July 29, 1981

EXERCISE PARTICIPANTS	NUMBER OF EVALUATORS
Wisconsin State Area Southeast Region, Waukesha	1 Federal
Kenosha County EOC, Kenosha	5 Federal

April 1982

Technological Hazards Branch
Natural and Technological Hazards Division
Federal Emergency Management Agency, Region V
Federal Center
Battle Creek, Michigan 49016

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F PDR

PART II

EXECUTIVE SUMMARY

This report contains the findings of the Federal Emergency Management Agency and the Regional Advisory Committee Region V analysis of the participation and performance of Kenosha County during the Zion re-exercise, October 7, 1981. The need for a redemonstration of radiological emergency preparedness became apparent when the Federal evaluators concluded during the original Zion site-specific exercise of July 29, 1981, that there was an insufficient demonstration of radiological emergency preparedness.

Six Federal evaluators met in Kenosha County October 6, 1981, for a pre-exercise briefing. Exercise materials were distributed and a discussion was held to answer questions. The evaluators were assigned to the State Area Emergency Operations Center, Waukesha; and the Kenosha County Emergency Operations Center, Kenosha. All evaluators were in place in advance of the beginning of the exercise.

The utility, Commonwealth Edison Company, initiated the "Alert" message at approximately 8:00 a.m., October 7, 1981. The termination of the exercise was at 12:00 Noon the same day.

The scenario was a simulated accident at the Zion Nuclear Power Station which included a gaseous radioactive release in a northerly direction which would directly impact Kenosha County. Evacuation was to affect sectors P, Q, and R out to 10 miles.

Following the exercise, evaluators met in unison, because of the small number involved, to begin to consolidate their findings into a composite exercrit. The RAC Chairman assisted the teams in putting together the post-exercise report.

The exercise critique was presented to the Wisconsin State and County officials and participants the evening of October 7, 1981.

The Public Meeting was held November 4, 1981, at the Kenosha County Courthouse.

The results of this report will become a significant contributor to the "Regional Director's Evaluation." It represents the most current assessment of Wisconsin off-site planning for an accident at the Zion Nuclear Power Station.

CONCLUSION

It is believed the overall redemonstration of response capabilities of the response organizations reflects significant improvement since the July 29, 1981, exercise.

It is my assessment that the response organizations have the capability to implement their emergency plans and the implementation of their plans would provide the necessary actions to protect the public health.

There are some exceptions which are highlighted on pages 24 through 26.

PART III

NARRATIVE DESCRIPTION AND SUMMARY LISTINGS

The subsequent pages of this report addresses the strengths and weaknesses of Kenosha County's Radiological Emergency Preparedness as it applies to the Zion Nuclear Power Station.

To test the preparedness and planning for Kenosha County, a scenario was developed which included Wisconsin Department of Emergency Government, State Area, Southeast Region; and Kenosha County Department of Emergency Government, Kenosha.

In the re-exercise, the utility was involved only to the extent to initiate the emergency action levels for exercise play.

The Federal Emergency Management Agency and the Regional Advisory Committee Region V evaluated the off-site preparedness at Kenosha County EOC, Kenosha, and the State Area, Southeast Region, Waukesha.

The findings which follow are formatted to follow the exercrit sections I-X and because of the re-exercise, address only the Wisconsin State Area EOC Southeast Region and Kenosha County EOC, Kenosha.

WISCONSIN

Wisconsin State Area Southeast Region

SUMMARY I - Emergency Operations Facilities & Resources (Space, Internal Comm., Displays, Security)

The State control center for the purpose of this exercise was from the basement of the State Police Headquarters, Waukesha, Wisconsin. Space, internal communications, displays, and security were adequate. The State did not become totally operational and functioned primarily as exercise controllers.

The purpose of the exercise was to re-test the emergency response capability of Kenosha County. If, however, the State was fully operational from this EOC the facility would be adequate to meet the operational needs of the State in general.

F 1 b Adequacy of Communications Systems (Primary and Backup) With Contiguous State/Local Governments Within the EPZs

Communications with contiguous local EOCs were accomplished primarly via radio. As the radio use became saturated, the use of landline (telephones) was utilized more extensively late in the exercise. The use of "telecopy" or other suitable hard copy would be more efficient for complicated messages. Kenosha found some difficulty in copying longer messages dealing with accident assessment data. Otherwise, communications were adequate.

F 1 c — Adequacy of Communications, as Appropriate, With Federal Emergency Response Organizations

Not observed

F 1 d — Adequacy of communications systems between the Nuclear Facility and Near-Site EOF, and State and for Local EOCs

Communications between the nuclear facility EOF and local EOCs were adequate to meet the needs of the exercise.

C 1 c — Adequacy of Specific State or Local Resources Needed to Support Federal Response

Not observed

Adequacy of EOC Working Space and Amenities

Working space and amenities are adequate to accommodate the emergency response personnel as well as to facilitate their ability to respond operationally.

Adequacy of EOC Internal Communications, Including Equipment, Displays, and Message-Handling Procedures

Internal communications and displays were adequate. For this exercise, it must be noted that this EOC was not fully operational, therefore, not all equipment was fully used as could have been in a full-scale exercise. The addition of 3 phones since the July 29 exercise with microwave capability to Madison (State EOC) and three counties was noted as an improvement.

Adequacy of EOC Security Measures

Security of this EOC located in the basement of the State Police Headquarters basically speaks for the adequacy of the security.

H 3 — Overall Adequacy of the Emergency Operating Center (EOC)

This particular EOC is adequate to meet the needs of most any general emergency.

J 10 a — Adequate Maps Displayed Showing Evacuation Routes, Sampling Points, Relocation Centers and Shelter Areas

Maps showing evacuation routes, sampling points, etc., although not elaborate, were adequate. However, they were not referred to during this exercise to any great extent.

J 10 b — Adequate Maps Displayed Showing Population Distribution Near Nuclear Facility by Evacuation Areas

Comment above (J 10 a) applies also for this element as well.

SUMMARY II - Alerting and Mobilization of Officials and Staff (Staffing, 24-Hour Capability, Alerting Timeliness)

Since this function was not fully operational, the reduced State staff was in place prior to the exercise in order that they would be ready to perform a controller role. If the State was operational in their normal emergency mode, they would have been able to maintain an adequate 24-hour extended operational capability as demonstrated in the July 29 exercise.

A 1 e — Capability for 24-Hour Initial Emergency Response and Manning of Communications

Since the EOC is located in the basement of the State Police Headquarters, there is adequate emergency response capability on a 24-hour/day basis.

A 4 — Capability for 24-Hour Continuous Emergency Response

Since the EOC is located in the basement of the State Police Headquarters, there is adequate emergency response capability on a 24 hour/day basis. The State emergency services has the ability to man the EOC 24 hours.

E 1 — Adequacy of Procedures Used for Notif. of Emer. Response Organizations Including Means for Verification of Messages

Not observed

E 2 — Adequacy of Procedures Used for Alerting, Notifying and Mobilizing Emergency Response Personnel

Not observed

C 2 a — If Appropriate, Timely Dispatch of a Representative to Licensee's Near-Site EOF

It is understood that if a requirement was identified such that a representative was necessary at the licensee's near-site EOF, the State could respond.

F 1 a — Adequacy of Emergency Response Communications Equipment Used with Prompt Activation

Emergency response communications network as maintained at the Waukesha State Police Headquarters would be the appropriate location in which to maintain a 24 hour communications network.

F 1 e — Adequacy of Communications Equipment Used for Alerting and Activating Emergency Response Personnel

Not observed

F 2 — Capability to Communicate with Fixed and Mobile Medical Support Facilities

Not observed

H 4 — Demonstration of Timely and Efficient Activation and Staffing of EOCs and Other Facilities

The results of the procedures to mobilize the Kenosha EOC emergency response staff were reported as fully operational at 0840 a.m. (Oct 7).

SUMMARY III - Emergency Operations Management (Organization, Control, Leadership, Support by Officials, Decision Making)

The overall leadership capability during this limited operational mode demonstrated adequate leadership through knowledge of the plan and procedures and the ability to make sound decisions. Again, reflecting a different mode of operations for the State, this State control center was established for the purpose of this exercise to complete communication links between the State and Kenosha County. Along with other surrounding Counties, this latter capability demonstrated adequate leadership, support by participation of State officials which facilitated decision making.

A 1 a — Evidence that Specific Organizations have been Adequately Established as Part of Overall Response

Not observed

A 1 d — Demonstration That a Specific Individual, by Title, Was Effectively in Charge of Emergency Response

The ability of the "leader" to manage this EOC is adequate.

A 2 a — Demonstration that Primary & Support Functions & Responsibilities Have Been Assigned to Specific Organizational Elements

Not observed

C 1 a — Evidence That a Specific Person Has Been Authorized to Request Federal Assistance (State Only)

Not observed

D 3 — An Emergency Classification System was Effectively Used and Was Consistent With That of the Utility

The emergency classification system is consistent with that of the utility.

D 4 — Adequate Written Procedures Are Used for Emergency Actions Consistent with Facility RECC and Local Offsite Conditions

Recommendations were consistent with the facility in view of off-site conditions. Not many impediments were injected by the State during the exercise play. Toward the end (last hour of the exercise) the State injected a few problems to the evacuation phase.

Demonstration of Effective Coord. Between Emergency Response Dir. & Staff, Thru Oral Briefings, Staff Meetings, Etc.

Not observed

Adequacy of Support and/or Participation by Elected Officials

Not observed

SUMMARY IV - Public Alerting & Notification (Means of Notification - Sirens, Vehicles, or Other Systems)

The use of a prompt alerting and notification system was not implemented. The State simulated activation of such a system and sent a message to Kenosha County to have them ensure residents in that County tune to their local Emergency Broadcast Station (EBS) for instructions.

E 5 Evidence of a Reliable System for Dissemination to the Public of Appropriate Info Received from the Licensee, e.g., EBS

Not observed

E 6 Adequacy of Means Used for Notification & Prompt Instruction to the Public in the Plume EPZ (Within 15 Minutes)

Not observed

E 7 Effective Use of Instructional Messages for the Public in Affected Areas

Not observed

J 10 c Adequacy of Means Used for Notifying All Segments of Transient and Resident Population

Not observed

SUMMARY V - Public and Media Relations (Publications, Press Facilities, Media Briefings, Release Coordination)

All public and media contact was simulated from the State control. No discussion can be rendered on these elements regarding public and media relations.

G 1 Evidence of Dissemination of Information to the Public, Within the Last Year

Not observed

G 2 Evidence of a Public Info Program for Permanent & Transient Pop in the Plume EPZ, Such as Posted Notices, Etc.

Not observed

G 3 a Appropriate Points of Contact for the Media Have Been Designated

Not observed

Adequacy of Joint Media Facility, Where Appropriate

Not observed

Adequacy of Issued Press Releases

Not observed

G 4 a A Media Spokesperson Has Been Designated Who Has Access to All Necessary Information

Not observed

G 4 b — Adequacy of Arrangements for Exchange of Information Among Spokespersons

Not observed

G 4 c — Adequacy of Coordinated Arrangements for Rumor Control Measures

Not observed

SUMMARY VI - Accident Assessment (Staff & Field Operations, Monitoring, Equipment, Technical Calculations, Use of PAGs)

A member of the State Health Department was present at the State control point and thus was available to assist in accident assessment. He provides technical advise to decision makers and during this exercise was basically responsible to provide exercise data, problems, advise, etc.

H 7 — Adequacy of Offsite Radiological Monitoring Instruments

Not observed

H 12 — An Adequate Central Point Has Been Established for Receipt and Analysis of Field Monitoring Data and Sample Media

Not observed

I 7 — Adequacy of Capability and Resources for Field Monitoring Within the Plume EPZ

Not observed

I 8 — Adequate Capability to Make a Rapid Assessment of Magnitude & Location of Liquid or Gaseous Radiological Hazards

Not observed

I 9 — Capability for Measurement of Radioiodine Concentrations in Plume EPZ Under Field Conditions to 10 F-7 (State Only)

Not observed

I 10 — Capability for Relating Measured Parameters to Dose Rates and Estimated Integrated Doses (State Only)

Not observed

I 11 — Capability for Locating and Tracking Airborne Radioactive Plume with Aid of Federal and/or State Resources (State Only)

Not observed

J 10 m — Capability to Recommend, Protective Action, Based on PAGs, in Plume EPZ (State Only)

The Radiological Health representative was present to provide the technical needs. During this exericse, he provided exercise problems for the County. He also provided advice as well.

C 3 — Evidence of Availability & Capability of Radiological Laboratories (State Only)

The State radiological representative very briefly expressed need for a lab. These needs should be checked out more closely.

SUMMARY VII - Actions to Protect the Public (Sheltering, Evacuation, Reception & Care, Transportation

Elements contained in this section were primarily simulated or not addressed and so were not observed.

J 2 — Coordination with Utility for Movement of Onsite Individuals to Offsite Locations

Not observed

J 9 — Capability for Implementation of Protective Measures

PAGs were utilized by the State in their recommendations for public protection.

J 10 d — Adequacy of Methods Used for Protecting Mobility Impaired Persons, Including Institutionally Confined

Not observed

J 10 g — Adequacy of Methods Used for Implementing Relocation of Populace

A qualified member of the Radiological Health Department was present and available to assess magnitude, location and overall impact of the release. He would normally respond in a manner to assist decision makers in response procedures to protect the public.

J 10 k — Adequacy of Organizations Identification of and Means for Dealing with Potential Impediments to Evacuation

Not observed

J 11 — Adequacy of Protective Measures in Ingestion EPZ, Including Dairy Facilities, Food Processing Plants, Etc. (State Only)

Appropriate measures were conveyed to Kenosha County to have dairy animals placed on stored food and "clean" water. No instructions were given to processing plants other than dairies.

J 10 h — Adequate Relocation Centers Have Been Established at Least 5 Miles & Preferably 10 Miles Outside the Plume EPZ

Not observed

J 12 — Adequacy of Procedures for Processing Evacuees in Relocation Ctrs, Including Hlth Care, Decon & Rad Monitoring, Etc

Not observed

Adequacy of Facilities, Supplies & Equipment at Relocation and/or Mass Care Centers

Not observed

Adequacy of Staffing at Relocation and/or Mass Care Centers

Not observed

SUMMARY VIII - Health, Medical, and Exposure Control Measures (Access Control, Adequacy of Equipment, Use of KI)

Recommendations as made by the Radiological Health Department office provided the State and Kenosha County valuable information regarding health and exposure control measures. Unfortunately, most evaluative elements within this section were simulated and could not be fully evaluated.

J 10 e — Adequacy of Provisions for Use of KI for Emergency Workers and Institutionalized Persons in Plume EPZ

Not observed

J 10 f — Adequacy of Methods Used by State Health Department in Decisions to Administer KI to Central Population (State Only)

Not observed

J 10 j Adequacy of Control of Access to Evacuated Areas

Not observed

K 3 a Adequacy of a 24 Hour A Day Capability to Determine Dose Received by Emergency Workers

Not observed

K 3 b Demonstration of Adequate and Frequent Emergency Worker Dosimeter Readings & Maintenance of Dosage Records

Not observed

K 4 Evidence That an Adequate Decision Chain Has Been Established to Authorize Exposure for Emer Workers in Excess of PAGs

Not observed

K 5 a Evidence That Appropriate Action Levels Have Been Specified for Determining Need for Decontamination

Not observed

K 5 b Adequacy of Measures for Decontamination of Emergency Personnel, Supplies, and Equipment, and for Waste Disposal

Not observed

L 1 Adequate Capability Demonstrated by Local and/or Backup Hospital and Medical Services for Handling Personnel

Not observed

L 4 Adequate Capability Demonstrated for Transportation of Radiological Accident Victims to Medical Support Facilities

Not observed

M 4 Capability for Periodic Estimation of Total Population Exposure (State Only)

Not observed

SUMMARY IX - Recovery and Reentry Operations

The State provided reentry/recovery authority and injected a delay to this procedure due to a 20 MPH wind that would have prevented an immediate reentry even after the release was controlled. This added some realism to reflect that rentry may not always be "automatic" because the release at the facility had been brought under control.

M 3 - Adequacy of Established Means for Informing Response Org That Recovery and Reentry Can Be Initiated (State Only)

Not observed

M 1 - Adequacy of Procedures Demonstrated for Reentry and Relaxation of Protective Measures Allowing Reentry

Not observed

SUMMARY X - Relevance of the Exercise Experience (Benefit to Participants, Adequacy of the Scenario)

The scenario, even in its abbreviated form, provided a valuable experience to participants. The scenario as a whole did not adequately test all areas and elements.

N 1 b - Adequacy of Scenario to Test Capability to Mobilize State and Local Personnel and Resources

Not observed

N 1 a - Adequacy of Ex. to Test Integrated Capabilities & Major Portions of the Basic Existing Response Elements in Affected Org

The exercise established a base to test many components of the State response team. Because this was a re-exercise principally for Kenosha County, the State monitored and participated to the extent to assist the County in demonstrating a re-performance. What the State did was adequate.

Benefit of Exercise to Participants

Again, the State acted as exercise control, therefore, were not classified as participants as generally experienced during "full" exercise.

Kenosha County

SUMMARY I - Emergency Operations, Facilities & Resources (Space, Internal Comm., Displays, Security)

Significant improvements were noted in this exercise as compared with the exercise of July 29. There are comments addressing specific areas which will enhance the operation of the EOC. These include primarily internal communications.

F 1 b Adequacy of Communications Systems (Primary and Backup) With Contiguous State/Local Governments Within the EPZs

They have direct radio communications from the Sheriff's office to contiguous Counties. From the EOC they can communicate with Walworth County via radio relay through the Southeast Area. Recommend direct link from Walworth County to the EOC.

F 1 c — Adequacy of Communications, as Appropriate, With Federal Emergency Response Organizations

Not observed

F 1 d — Adequacy of Communications Systems Between the Nuclear Facility and Near-Site EOF, and State and for Local EOCs

No provision for radio communications between nuclear facility, local EOC and power station existed.

C 1 c — Adequacy of Specific State or Local Resources Needed to Support Federal Response

Not observed

Adequacy of EOC Working Space and Amenities

Improvement upon the physical facility would enhance the working environment.

Adequacy of EOC Internal Communications, Including Equipment, Displays, and Message-Handling Procedures

The Radio operator was kept busy copying and transferring messages to the message form. This delayed the receipt of several messages.

Although the status boards were well constructed and displayed, they were not used properly until later in the exercise. The flow of communications between the EOC and communications center was adequate, the message controller should assign control numbers to all messages in order to maintain better control. Perhaps the form, which is good, could be modified to include another copy for the controller's use.

Adequacy of EOC Security Measures

Security effectively restricted access to authorized personnel only.

H 3 — Overall Adequacy of the Emergency Operating Center (EOC)

As an interim EOC, the facility was adequate for the conduct of operations.

J 10 a — Adequate Maps Displayed Showing Evacuation Routes, Sampling Points, Relocation Centers and Shelter Areas

Maps were effectively posted showing evacuation routes, sectors and city/County streets. Relocation and shelter areas were well designated on separate maps.

J 10 b — Adequate Maps Displayed Showing Population Distribution Near Nuclear Facility by Evacuation Areas

Maps were adequately posted and well prepared. Population distribution was indicated by standard sector/mile zone areas.

SUMMARY II - Alerting and Mobilization of Officials and Staff (Staffing, 24-Hour Capability, Alerting Timeliness)

Alerting and mobilization of officials and staff were well demonstrated. An improvement noted since the July 29 exercise was the presence and use of Radiological staff and support personnel in the EOC.

A 1 e — Capability for 24-Hour Initial Emergency Response and Manning of Communications

The communications operations is staffed by the Sheriff's office on a 24-hour basis.

A 4 — Capability for 24-Hour Continuous Emergency Response Operations

They demonstrated capability for 24-hour continuous operation. They may want to consider a phased-in shift change in the future to insure a more orderly transition of personnel.

E 1 — Adequacy of Procedures Used for Notif. of Emer. Response Organizations Including Means for Verification of Messages

The County was precluded from complying with its own plans' provisions for notification verification since they were superseded by the State at its October 6 pre-exercise meeting at Waukesha.

E 2 — Adequacy of Procedures Used for Alerting, Notifying and Mobilizing Emergency Response Personnel

Procedures and alerting schedules were current and they were followed during notification and mobilization for the exercise.

C 2 a — If Appropriate, Timely Dispatch of a Representative to Licensee's Near-Site EOF

Not observed

F 1 a — Adequacy of Emergency Response Communications Equipment Used With Prompt Activation

Not observed

F 1 e — Adequacy of Communications Equipment Used for Alerting and Activating Emergency Response Personnel

Emergency response personnel were alerted by telephone.

F 2 — Capability to Communicate With Fixed and Mobile Medical Support Facilities

The only communications equipment is the telephone. No radio communications exist.

H 4 — Demonstration of Timely and Efficient Activation and Staffing of EOCs and Other Facilities

The EOC was completely staffed with key County and city officials. As the time of the "Alert," all departments were telephoned and told to report to the EOC shortly after 8:00 a.m.

SUMMARY III - Emergency Operations Management (Organization, Control, Leadership, Support by Officials, Decision Making)

Emergency operations management was effectively demonstrated. Significant improvements in Direction and Control were noted since the July 29 exercise.

A 1 a — Evidence that Specific Organizations Have Been Adequately Established as Part of Overall Response

Key response organizations were well represented in the EOC.

A 1 d — Demonstration That a Specific Individual, by Title, Was Effectively in Charge of Emergency Response

The County Board Chairperson was designated as the lead EOC official in charge of emergency responses. In actuality, this function was performed jointly with the city mayor as designated in the plan.

A 2 a — Demonstration That Primary & Support Functions & Responsibilities Have Been Assigned to Specific Organizational Elements

Each primary and support function is specified in the plan and was carried out for each organization.

C 1 a — Evidence That a Specific Person Has Been Authorized to Request Federal Assistance (State Only)

Not observed

D 3 An Emergency Classification System Was Effectively Used and Was Consistent With That of the Utility

The emergency classification system used is consistent with the licensee's.

D 4 Adequate Written Procedures Are Used for Emergency Actions Consistent with Facility RECC and Local Offsite Conditions

Procedures for emergency actions consistent with facility recommendations and local offsite conditions were adequately demonstrated.

Demonstration of Effective Coord. Between Emergency Response Dir. & Staff, Thru Oral Briefings, Staff Meetings, Etc.

Not observed

Adequacy of Support and/or Participation by Elected Officials

Not observed

SUMMARY IV - Public Alerting & Notification (Means of Notification - Sirens, Vehicles, or Other Systems)

A 15 minute public alerting and notification capability was not demonstrated. This deficiency should be corrected when the public alerting notification system is installed. It should be noted that prescripted messages and procedures for notifying transient population were adequately demonstrated.

E 5 Evidence of a Reliable System for Dissemination to the Public of Appropriate Info Received from the Licensee, e.g., EBS

The PIO notified the news media of the EOC activation and changes in the emergency classification level. Prescripted messages were utilized and the facility was contacted.

E 6 Adequacy of Means Used for Notification & Prompt Instruction to the Public in the Plume EPZ (Within 15 Minutes)

Did not meet the 15 minute alerting and notification requirement. This deficiency should be corrected when the proposed alerting and notification system is installed.

E 7 Effective Use of Instructional Messages for the Public in Affected Areas

The PIO consistently outlined prescripted messages for public information.

J 10 c - Adequacy of Means Used for Notifying All Segments of Transient and Resident Population

The resident population was notified (simulated) by police, loud speakers, sirens, and scripted radio messages.

SUMMARY V - Public and Media Relations (Publications, Press Facilities, Media Briefings, Release Coordination)

Public and media relations were handled very well at the Kenosha County EOC. Information was disseminated to the public on a regular basis regarding plant status and appropriate protective actions. Since the operation of the JPIC was simulated, information exchange could not be evaluated.

G 1 - Evidence of Dissemination of Information to the Public, Within the Last Year

The PIO periodically informed the public of changes in plant emergency classification status; issued verified press releases to the media for protective actions throughout the exercise. Materials are distributed periodically and have been distributed within the last year.

G 2 - Evidence of a Public Info Program for Permanent & Transient Pop in the Plume EPZ, Such as Posted Notices, Etc.

The booklet "What to do in Case of a Nuclear Station Emergency" is available in hotels, motels, libraries and many other public places. They are sent out to the utilities' customers regularly.

G 3 a - Appropriate Points of Contact for the Media Have Been Designated

This was previously demonstrated in the July 29 exercise and is adequate.

- Adequacy of Joint Media Facility, Where Appropriate

Not observed during this exercise but addressed in previous exercise and is adequate.

- Adequacy of Issued Press Releases

Not observed during this exercise but addressed in previous exercise and is adequate.

G 4 a - A Media Spokesperson Has Been Designated Who Has Access to All Necessary Information

A spokesperson is designated. He had access to the Mayor and County Board Chairperson for necessary information.

G 4 b - Adequacy of Arrangements for Exchange of Information Among Spokespersons

Not observed during this exercise but addressed in previous exercise and is adequate.

G 4 c — Adequacy of Coordinated Arrangements for Rumor Control Measures

Not observed

SUMMARY V1 - Accident Assessment (Staff & Field Operations, Monitoring, Equipment, Technical Calculations, Use of PAGs)

Not observed

H 7 — Adequacy of Offsite Radiological Monitoring Instruments

Not observed

H 12 — An Adequate Central Point Has Been Established for Receipt and Analysis of Field Monitoring Data and Sample Media

Not observed

I 7 — Adequacy of Capability and Resources for Field Monitoring Within the Plume EPZ

Not observed

I 8 — Adequate Capability to Make a Rapid Assessment of Magnitude & Location of Liquid or Gaseous Radiological Hazards

Not observed

I 9 — Capability for Measurement of Radioiodine Concentrations in Plume EPZ Under Field Conditions to 10 F-7 (State Only)

Not observed

I 10 — Capability for Relating Measured Parameters to Dose Rates and Estimated Integrated Doses (State Only)

Not observed

I 11 — Capability for Locating and Tracking Airborne Radioactive Plume With Aid of Federal and/or State Resources (State Only)

Not observed

J 10 m — Capability to Recommend, Protective Action, Based on PAGs, in Plume EPZ (State Only)

Not observed

C 3 — Evidence of Availability & Capability of Radiological Laboratories (State Only)

Not observed

SUMMARY VII Actions to Protect the Public (Sheltering, Evacuation, Reception & Care, Transportation)

Actions to protect the public were adequately demonstrated. Timely implementation of the evacuation process needs improvement.

J 2 Coordination with Utility for Movement of Onsite Individuals to Offsite Locations

Not observed

J 9 Capability for Implementation of Protective Measures

Protective measures were adequately implemented, specifically with regard to issuance of dosimeters to emergency personnel, restricting access to exposed areas and other appropriate protective measures.

J 10 d Adequacy of Methods Used for Protecting Mobility Impaired Persons, Incuding Institutionally Contined

The evacuation order stated specifically that those individuals unable to be moved should stay in place for shelter.

J 10 g Adequacy of Methods Used for Implementing Relocation of Populace

The local EOC was precluded from implementing evacuation procedures in a timely fashion because it delayed verification of the evacuation notice. The initial evacuation was not received through normal channels (was received thru JPIC) and the necessary verification was not responded to by the State Area EOC for approximately 25 minutes. Based on the delayed verification, various support units implemented a premature evacuation.

J 10 k Adequacy of Organizations Identification of and Means for Dealing With Potential Impediments to Evacuation

A simulated disturbance at a gas station in an alternate evacuation route was promptly handled by the Sheriff's Department. A simulated shortage of gas supplies was similarly well handled by the Sheriff.

J 11 Adequacy of Protective Measures in Ingestion EPZ, Including Dairy Facilities, Food Processing Plants, Etc. (State Only)

Not observed

J 10 h — Adequate Relocation Centers Have Been Established at Least 5 Miles & Preferably 10 Miles Outside the Plume EPZ

During the exercise, a simulated relocation of personnel was ordered into Whitewater which is 60 miles from the affected sectors. The County should re-examine its decision-making process regarding utilization of relocation centers at such distances based on projected evacuation magnitude.

Adequacy of Facilities, Supplies & Equipment at Relocation and/or Mass Care Centers

Not observed

Adequacy of Staffing at Relocation and/or Mass Care Centers

Not observed

J 12 — Adequacy of Procedures for Processing Evacuees in Relocation Ctrs, Including Hlth Care, Decon & Rad Monitoring, Etc.

Not observed during this exercise but adequately addressed in the July 29, 1981, exercise.

SUMMARY VIII- Health, Medical, and Exposure Control Measures (Access Control, Adequacy of Equipment, Use of KI)

Access control measures and dosimetry were well demonstrated during the exercise.

J 10 e — Adequacy of Provisions for Use of KI for Emergency Workers and Institutionalized Persons in Plume EPZ

Not observed

J 10 F — Adequacy of Methods Used in Making Decisions to Administer KI to Central Population

Not observed

J 10 j — Adequacy of Control of Access to Evacuated Areas

The Highway Department was deployed to control access to the evacuation area. This was conducted in conjunction with the Sheriff's Department.

K 3 a — Adequacy of a 24 Hour a Day Capability to Determine Dose Received by Emergency Workers

Consideration should be given to providing ample quantities of 200MR self-reading dosimeters for emergency personnel. The plan should be clarified in its specification of dosimeter capability.

K 3 b — Demonstration of Adequate and Frequent Emergency Worker Dosimeter Readings & Maintenance of Dosage Records

Provisions were made to obtain periodic dosimeter readings from emergency workers.

K 4 — Evidence That an Adequate Decision Chain Has Been Established to Authorize Exposure for Emer Workers in Excess of PAGS

Not observed

K 5 a — Evidence That Appropriate Action Levels Have Been Specified for Determining Need for Decontamination

Not observed

K 5 b — Adequacy of Measures for Decontamination of Emergency Personnel, Supplies, and Equipment, and for Waste Disposal

Not observed

L 1 — Adequate Capability Demonstrated by Local and/or Backup Hospital and Medical Services for Handling Personnel

Not observed

L 4 — Adequate Capability Demonstrated for Transportation of Radiological Accident Victims to Medical Support Facilities

Not observed

M 4 — Capability for Periodic Estimation of Total Population Exposure (State Only)

Not observed

SUMMARY IX - Recovery and Reentry Operations (Adequacy of Plans and Procedures)

The general plans and procedures for reentry and relaxation of protective measures, although abbreviated, were followed.

M 3 — Adequacy of Established Means for Informing Response Org That Recovery and Reentry Can Be Initiated (State Only)

Not observed

M 1 — Adequacy of Procedures Demonstrated for Reentry and relaxation of Protective Measures Allowing Reentry

The procedures were abbreviated because of the compressed time of the exercise. Even though the time was compressed, the procedures were followed.

SUMMARY X - Relevance of the Exercise Experience (Benefit to Participants, Adequacy of the Scenario)

It was evident to all of the observers that the exercise was of significant benefit to all participants. More consideration must be given to scenario development to address all areas needing improvement.

N 1 b - Adequacy of Scenario to Test Capability to Mobilize State and Local Personnel and Resources

The scenario for Kenosha County demonstrated an adequate capability to mobilize resources. The scenario was not available for study and comment until just prior to the exercise.

N 1 a - Adequacy of Ex. to Test Integrated Capabilities & Major Portions of the Basic Existing Response Elements in Affected Org

The scenario did not provide for testing the areas identified to be deficient during the July exercise, specifically, internal communication. The areas involving information flow between the County EOC and the JPIC and between the County EOC and the State, need to be demonstrated. Future scenarios should be developed jointly between the State and County to accomplish this demonstration.

Benefit of Exercise to Participants

Several participants expressed the benefits received from their participation in the exercise. Participants demonstrated a healthy and enthusiastic attitude in the conduct of the exercise.

PART IV

SUMMARY LISTING OF SIGNIFICANT DEFICIENCIES

Wisconsin State Area Southeast Region

E 6 The State shares a significant portion of the responsibility for this element. It is realized full compliance cannot be achieved until the "Prompt Alerting and Notification System" is installed and operationally tested. Until such time the element is deficient.

Kenosha County

E 6 The County is unable to meet the 15 minute prompt alerting and notification as stipulated in the guidance criteria. Once the "System of Prompt Alerting and Notification" is installed, personnel are trained and it is operationally tested and certified, it is believed this element can be adequately met.

PART V

SUMMARY LISTING OF MINOR DEFICIENCIES

Wisconsin State Area Southeast Region

In the Area of Training - None

In the Area of Resources

C 3 During the exercise, there was a need for a laboratory analysis for assessment of collected field data. The Radiological Health Officer needed this capability upon which to base his recommended protective actions.

In the Area of the Plan - None

Kenosha County

In the Area of Training

H 3 Consideration should be given to additional assistance for the radio operator in documenting messages. An improved accounting system should be given the message handling system, such as numerically recording each message for sequence and control. Also, an additional copy could be included in the set for the message controller's use and record keeping.

A 4 To limit noise and confusion, a phased-in shift change would enhance the changing-of-the-guard.

E 1 In this case the County was superseded. To gain this experience, additional training should be conducted.

J 10 c This is a vital part of exercise demonstration. During this exercise, this was extensively simulated. Therefore, it needs to be actively demonstrated during the next exercise.

J 10 g Greater importance should be given to a more timely verification of the evacuation notice.

N 1 a An overall assessment would conclude good internal communications exist. However, the scenario did not emphasize this particular need for re-demonstration. Because this was a re-exercise, the media news center (JPIC) and the State (Madison) did not become actively involved. Therefore, these vital communications functions could not be exercised and, as a consequence, were not evaluated. It would be expected that in the scenario development for the next exercise that it include the necessary activities for the demonstration of the communications function as described above.

In the Area of Resources

F 1 b A direct communications tie-in between Kenosha County EOC and Walworth County EOC is recommended.

F 2 It is recommended radio communications be established between the County EOC and fixed and mobile medical support facilities.

J 10 h Consideration should be given to relocation centers not so distant to reduce travel time and traffic.

K 3 a Consideration should be given to providing ample quantities of 200 MR self-reading dosimeters for emergency personnel. The plan should be clarified in its specification of dosimeter capability.

HILL FARMS
STATE EOC
KENOSHA LOCAL EXERCISE INPUT

0800	Log NAWAS ALERT call from CECO and complete NARS form on NAR system.
0805	TTY FEMA, Illinois ESDA that Zion/Kenosha local exercise has commenced.
0807	Advise Governor's Office of Exercise status (call to Mary Williams, Paul Swain, or Bill Kraus by Administrator or Deputy Administrator.
0810	Advise Administrator of Exercise status.
0815	Respond to all calls on TTY, NAWAS, NARS, Commercial Telephone, and CDNARS. Keep SEA advised.
1200	Advise Governor, FEMA, Illinois ESDA and NRC of exercise termination.

SOUTH EAST AREA
KENOSHA LOCAL EXERCISE INPUT

TIME		COMMUNICATION SYSTEM
0800	CECO advises ALERT situation.	NAWAS and NARS
0802	Verify CECO ALERT	Comm. Tel., NAWAS or NARS
0804	Notify or verify fanout of ALERT to Kenosha, Racine & Walworth Counties.	Comm. Tel. and L.G. Radio
0820	Southeast Area advises Kenosha, Racine & Walworth Counties it is operational and requests status report when they are operational.	L.G. Radio or Comm. Tel.
0825	Southeast Area transmits available information to Kenosha, Racine & Walworth for staff briefing.	L.G. Radio or Comm. Tel.
0830	Southeast Area advises Kenosha, Racine & Walworth that Rad Health teams & officer enroute.	L.G. Radio or Comm. Tel.
0845	CECO advises SITE EMERGENCY situation. Verified on NAWAS and on NARS with Kenosha, Racine & Walworth acknowledging receipt.	NAWAS & NARS
0847	Staff briefing.	
0850	Southeast Area advises Kenosha, Racine & Walworth to review GENERAL EMERGENCY action levels and alert field staffs.	
0855	RAD team initial report relayed to Counties by Radiation officer.	Comm. Tel.
0900	Southeast Area request operations status report from Kenosha, Racine, and Walworth.	L.G. Radio or Comm. Tel.
0910	CECO advises GENERAL EMERGENCY and Southeast Area confirms information with Kenosha, Racine and Walworth counties. Standby for possible evacuation.	NAWAS & NARS
0920	Southeast Area Advises Kenosha of need for shift change to be at 10 a.m.	Comm. Tel.
0930	Southeast Area request operations status reports from Kenosha, Racine and Walworth counties.	
0945	Kenosha advises Southeast Area 2nd shift being briefed (separate location).	
1000	2nd shift in operational mode at Kenosha - list personnel by services.	

1010 CECO advises release is occurring.

1015 Southeast Area advises Kenosha, Racine & Walworth that release is occurring - inform local field staff of precautions ( ) and stand by.

1020 Southeast Area advises Governor has declared a STATE OF EMERGENCY for Kenosha, Racine and Walworth counties.

1025 Southeast Area advises Kenosha, Racine & Walworth of evacuation requirements to 5 1/2 miles.

1030 Radiation Protection advises radiation status for Kenosha, Racine and Walworth counties and protective actions to be taken for workers and public.

1040 Southeast Area advises Kenosha that evacuation to 5 1/2 miles should be initiated in Town of Pleasant Prairie, sectors .

1050 Southeast Area advises Kenosha County that Walworth County reception and congregate care centers are activated.

1055 Southeast Area advises Kenosha County that Racine County reception and congregate care centers are activated.

1100 Southeast Area advises Kenosha, Racine & Walworth counties of updated radiation status and advice.

1115 Southeast Area Radiation Protection advises Kenosha on dose projections based on CECO data.

1130 Southeast Area requests status report from Kenosha, Racine & Walworth Counties including estimates of evacuated personnel.

1200 Southeast Area advises Kenosha, Racine & Walworth counties to terminate exercise.

RADEF

Kenosha Exercise
Inputs

TIME		COMMUNICATIONS SYSTEM
0855	Radiation data collection teams on-site in Kenosha County.	Commercial phone
	Radiation sit-rep. using CECO data.	
1030	Current radiation sit-rep. based on data collection teams reports and advice to Kenosha County on precautionary measures for people and animals.	Commercial phone
1100	Radiation sit-rep. update for evacuation procedures, work times, plume areas by sector, protective actions for those unable to evacuate.	Commercial phone
1200	Conformation from data collection teams of release termination immediate area of the plant.	Commercial phone

Region V

DEC 24 1981

Director
Technological Hazards Division

Acting Division Chief
Natural and Technological Hazards Division
Region V
Zion Site-specific Off-site Post Exercise Evaluation

Enclosed is the Zion site-specific off-site post exercise evaluation of the exercise for Illinois/Wisconsin conducted July 29, 1981. The comments and evaluation are a compilation of the Regional Advisory Committee and the Federal Emergency Management Agency Region V.

We have ask for comments from the states involved in approximately 30 days, February 5, 1982.

Frank Finch

Enclosure

cc: RD
Mr. Kellogg
Mr. Lee

NT-TH/GWenger/bb/x6011/12-24-81

FROM EPA NATL

DEC 04/02/0 0100Z

RR RECF RSFS HSCRQFA
R HSCRQAT ABB FO
FM EPA REGION V CATTLE QUEEN VI
TO ILLI/IRTATOR ILLINOIS TSDA
INFO RQRF/EPA REGION V CHICAGO IL
NATL/EPA WASHINGTON DC //SL-NT-TH-NFSS HFLPF//

RT
UNCLAS I" REPLY REFER TO RS-QQSZ, APR 7, 1982. RTT: RTR.
FROM JOHN T. ANDERSON, REGIONAL DIRECTOR.
1. ON DECEMBER 24, 1980, YOUR WERE SUBMISHED, BY MAIL, THE ZION SITE-SPECIFIC OFF-SITE POST EXERCISE EVALUATION OF THE JULY 22, 1981, EXERCISE. IN THE LETTER OF TRANSMITTAL EPA REGION V RE-QUESTED YOUR SCHEDULE OF IMPLEMENTATION ACTIONS TO CORRECT THE IN-ADEQUACIES RESULTING FROM THE EXERCISE. WE REQUESTED YOUR RESPONSE BY OR BEFORE FEBRUARY 5, 1982. TO DATE, THIS OFFICE HAS NOT RECEIVED YOUR RESPONSE.
2. WE ARE MOST ANXIOUS TO COMPLETE THE ZION PREPARATORY WORK, AS WE BELIEVE YOU ARE, IN READINESS FOR OUR RECEIPT OF THE ILLINOIS FORMAL SUBMISSION FOR ZION. ONLY THEN WILL WE BE IN A POSITION TO FORWARD THE "REGIONAL DIRECTOR'S EVALUATION" TO OUR NATIONAL HEADQUARTERS FOR REVIEW.
3. PLEASE PROVIDE EPA REGION V THE DATE FOR YOUR SUBMISSION OF THE CORRECTIVE ACTIONS FOR THE ZION EXERCISE OF JULY 22, 1981, AND THE DATE YOU EXPECT TO SUBMIT THE ZION FORMAL SUBMISSION (AS OUTLINED IN CFR 44 PART 350).
RT

NNNN #

POST EXERCISE EVALUATION

EXERCISE OF STATE AND LOCAL RADIOLOGICAL EMERGENCY RESPONSE PLANS FOR ILLINOIS AND WISCONSIN (NEAR THE ZION NUCLEAR POWER STATION)

ZION ILLINOIS

July 29, 1981

Prepared by:

Federal Emergency Management Agency
Plans and Preparedness Division, Region V
Federal Center
Battle Creek, Michigan 49016

8305100136 830408
PDR ADOCK 05000295
F PDR

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I. INTRODUCTION

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume lead responsibility for all off-site nuclear planning and response.

1. FEMA's immediate basic responsibilities in Fixed Nuclear Facility - Radiological Emergency Planning include:

   a. Taking the lead in off-site emergency planning and review and evaluation of State and local government emergency plans for adequacy.

   b. Determining whether the plans can be implemented, based upon observation and evaluation of exercises conducted in these jurisdictions.

   c. Coordinating the activities of other involved Federal and volunteer agencies:

      (1) Nuclear Regulatory Commission (NRC)
      (2) Environmental Protection Agency (EPA)
      (3) Department of Energy (DOE)
      (4) Department of Health and Human Services (HSA/PHS and FDA)
      (5) Department of Transportation (DOT)
      (6) Department of Agriculture (DA)

   Representatives of these agencies serve as members of the Regional Advisory Committee (RAC), which is chaired by FEMA. Formal submission of emergency plans to the RAC by the States and involved local jurisdictions is, in each case, followed by the exercising, critiquing, and evaluation of those plans. A Public Meeting is held to acquaint the citizenry with contents of the plans, answer questions about them, and receive suggestions on the plans.

2. A radiological emergency exercise was conducted July 29, 1981, between the hours of 6:00 a.m. and approximately 4:00 p.m. by the States of Illinois and Wisconsin. The purpose of the exercise was to assess the adequacy of the State and local radiological emergency response plans and the preparations to protect the public in the event of a radiological emergency involving the Zion Nuclear Power Station (ZNPS) operated by the Commonwealth Edison Company near Zion, Illinois.

   In Illinois, part of Lake County is within the 10-mile Emergency Planning Zone (EPZ), affecting about 160,000 residents. Part of Kenosha County, Wisconsin is also in the 10-mile EPZ affecting about 88,000 people.

   The exercise was conducted to test the ability of the governmental bodies in both States to carry out their portions of the radiological emergency plans. The field exercise for operations involved vehicles from police, fire, or other emergency agencies actually running notification routes or manning access control points. A number of token evacuations of volunteers took place.

3. A critique of the July 29 exercise was held at 1:00 p.m., July 30, 1981, at the Illinois Beach State Park Holiday Inn, Zion, Illinois.

4. A Public Meeting was held on Wednesday, August 12, 1981, at 7:00 p.m. at the Gurnee Holiday Inn, Gurnee, Illinois, and the Wisconsin Public Meeting was held November 4, 1981, at 7:00 p.m. at the Social Services Building, Rooms C, D, and E, 714 52nd Street, Kenosha, Wisconsin.

5. General RAC objectives for the operation phase of the plans were to exercise and evaluate the following elements as described in the All-State letter to State Emergency Services Directors in Region V, August 28, 1980:

   Communications and Warning
   Accident Assessment
   Capability of Field Assessment Teams
   Use of the Protective Action Guides (PAGs)
   Public Information
   Evacuation Methodology that would be used
   Provisions for Reentry and Recovery of the Affected Area
   Direction and Control

6. Participating organizations in Illinois and Wisconsin included:

   a. Illinois

      1. Illinois Emergency Services and Disaster Agency (ESDA), State EOC in Springfield; the ESDA Mobile Command Post located near Wadsworth, Illinois, about seven miles west of the ZNPS, and the ESDA Region 5 EOC, Wheaton, Illinois.

      2. Illinois Department of Nuclear Safety (IDNS) at Springfield, and at its mobile lab located near Wadsworth, and other State agencies as defined in the Plan.

      3. Local governments in Illinois, including Lake County at the Lake County Community Coordination Center (LCCCC) near Libertyville, and the cities of Gurnee, North Chicago, Park City, Waukegan, Winthrop Harbor, and Zion, and the reception facilities at Richmond.

   b. Wisconsin

      1. Wisconsin Department of Administration, Division of Emergency Government (DEG), Department of Health and Social Services, Division of Health (DOH), and support from relevant State agencies at the State DEG Emergency Operations Center (EOC) in Madison.

      2. Wisconsin DEG Southeast State Area located at its EOC in Waukesha.

3. Kenosha County Emergency Government and relevant supporting county agencies located at the County EOC in Kenosha.

4. Racine County Emergency Government with relevant supporting county agencies located at the County EOC in Racine, and reception facilities.

5. Walworth County Emergency Government with relevant supporting county agencies located at the County EOC in Elkhorn, and reception facilities.

7. There were 38 Federal observers, of whom 34 were assigned to 15 specific locations in Illinois and Wisconsin. In addition, there were four roving observers, three staff assistants assigned to the RAC Chairman to aid in administrative and clerical functions.

Observer	Agency	Location and/or Functions
G. Wenger	FEMA Reg. V [1]	Roving, for overview
D. Schein	FEMA Reg. 5	Illinois Region 5, all functions
D. King	FEMA Reg. 5	Illinois ESDA & DNS vans, all functions, becoming operational in the afternoon
J. Sutch	FEMA (CPR) [2]	Illinois ESDA & DNS vans, all functions
E. Jascewski	DOE	DNS vans, PAGs, RAFT
K. Travis	EPA	DNS vans, PAGs, RAFT
P. Tedeschi	EPA	DNS vans, PAGs, RAFT
S. Wolf	FEMA Reg. 5	Media Center, Public Information
E. Robinson	FEMA Reg. 5	Lake County Community Coordination Center (LCCCC), overview
H. King	FEMA (CPR)	LCCCC, Public Information
A. Canganelli	FEMA Reg. 5	LCCCC, Alert, Evacuation, and Hosting
P. Frost	FEMA Reg. 5	LCCCC, Communications
R. Burgin	NRC	LCCCC, Various functions
M. Jamgoshian	NRC	LCCCC, Various functions
D. Johnson	DOT	Roving, Transportation in Illinois
J. Henrici	FEMA Reg. 5	Gurnee, Various functions
K. Sommer	FEMA Reg. 5	Gurnee, Various functions
R. Freitag	FEMA Reg. 5	North Chicago, Various functions
B. McMahan	FEMA Reg. 5	North Chicago, Various functions
K. Wiste	FEMA Reg. 5	Park City, All functions
L. Rice	FEMA (CPR)	Waukegan, Various functions
R. Schwartz	FEMA Reg. 5	Waukegan, Various functions
G. Barber	FEMA (CPR)	Zion, Various functions
G. Pierson	FEMA Reg. 5	Zion, Various functions
W. Curtis	FEMA (ARC)	Zion, Evacuation Demonstration
R. Shapiro	FEMA Reg. 6	Zion, Evacuation Demonstration
J. Owen	PHS	Roving, Medical Functions in Illinois
S. Rifkind	FEMA Reg. 5	Wisconsin State Area (Waukesha), all functions
J. Devlin	FEMA (CPR)	Wisconsin State EOC (Madison), all functions
R. Buddecke	FEMA Reg. 5	Kenosha County, Various functions

Observer	Agency	Location and/or Functions
M. Moline	FEMA Region 5	Kenosha County, Reentry/Recovery
R. Blockovich	PHS	Kenosha County, Various functions
J. Patterson	NRC	Kenosha County, Various functions
J. Sorenson	DOT	Roving, Transportation in Wisconsin
R. Dorsey	FEMA Reg. 5	Racine County, Various functions
J. Millin	FEMA Reg. 5	Racine County, Various functions
R. Meyer	FEMA Reg. 5	Walworth County, Various functions
D. Robinson	FEMA Reg. 5	Walworth County, Various functions
B. Bailey	FEMA Reg. 5	RAC Staff Assistant
V. Jarvis	FEMA Reg. 5	RAC Staff Assistant
P. Rainier	FEMA Reg. 5	RAC Staff Assistant
E. Wenger	FEMA Reg. 5	RAC Staff Assistant

8. Major functions witnessed by Federal observers were evaluated in accordance with the following criteria:

   - Capability outstanding: excellent demonstration.
   - Capability good: exceeds minimum standards - some improvements recommended.
   - Capability acceptable: meets minimum standards - significant improvements needed.
   - Capability weak: does not meet minimum standards - essential improvements needed.
   - Capability not demonstrated or lacking.

9. Under Parts IV and V of this report for the States of Illinois and Wisconsin, respectively, are evaluations and recommendations for remedial actions. These evaluations and recommendations are organized according to the applicable Planning Standards (on which the State and local plans were developed) and Evaluation Criteria set forth in Section II of NUREG-0654, FEMA REP-1, Rev. 1.

   In this report, 16 recommendations given under Part IV for correcting deficiencies in Illinois, and 18 recommendations given under Part V for correcting deficiencies in Wisconsin, are provided in continuing numerical sequence following the critique of each observed function. For example, an observation under A. Assignment of Responsibility (Organization Control) might read: "There was no demonstration by means of a shift change or by listing designated replacement personnel that the jurisdiction could conduct operations around the clock for a protracted period." An example recommendation might read: "The jurisdiction must demonstrate the capability for 24-hour day emergency operation by means of shift change during the course of the exercise."

   State and local jurisdictions are required to take remedial actions responsive on a point-by-point basis, to the formal recommendations of the RAC. One month from receipt of this document, State and

local jurisdictions should submit to the RAC the corrective measures they have taken or intend to take. If remedial actions cannot be instituted immediately, then a detailed plan scheduling and implementing remedial actions must be provided.

The Regional Director of FEMA is responsible for certifying to the FEMA Associate Director, Radiological Emergency Planning, Washington, D.C., that any deficiencies noted in the exercise have been corrected and such corrections incorporated in the Plan.

10. A State, which seeks a review and approval by FEMA of its plan and annexes, shall submit an application for review and approval to the FEMA Regional Director of the Region in which the State is located. The application, in the form of a letter from the Governor, or other State official as the Governor may designate, shall contain one copy of the complete State plan with an indication that deficiencies have been corrected. Additionally, 15 copies are to be sent to the Regional Advisory Committee (RAC) Chairman, Region V, Battle Creek, Michigan, with a copy of the Governor's letter.

Upon receipt of a State plan from the Regional Director, the National Associate Director shall cause copies of the plan, together with the Regional Director's evaluation, to be distributed to the members of the Federal Interagency Central Coordinating Committee (FICCC) and other FEMA offices with appropriate guidance relative to their assistance in the FEMA review process as described in 44 CFR Part 350, Federal Register, Volume 45, Number 123, Tuesday, June 24, 1980 (Review and Approval of State and Local Radiological Emergency Plans and Preparedness). The Associate Director shall conduct such review of the State plan as deemed necessary prior to its being forwarded to the appropriate NRC licensing bodies.

II. EXECUTIVE SUMMARY

The objectives of the July 29, 1981, exercise were to assess and evaluate the adequacy of the Illinois and Wisconsin radiological emergency response plans and capabilities of the State and local governments to protect the public in the event of a radiological emergency at the Zion Nuclear Power Station (ZNPS) operated by the Commonwealth Edison Company (CECO). The consensus of the 38-member Federal Observer Teams involved in observing the response in the two States is that the objectives of the exercise were achieved, i.e., the teams were able to observe and evaluate the response by the off-site participants.

The exercise focused on the State and local off-site and utility on-site responses. The Commonwealth Edison Company and the ZNPS also participated to demonstrate the capability of the utility to cope with such an emergency on-site, as well as for providing appropriate interface with the State and local jurisdictions for issuing notification of simulated emergency event classifications and radiological releases through its Emergency Operations Facility (EOF).

The principal Illinois State agencies involved in the exercise were the Emergency Services and Disaster Agency (ESDA), the Department of Nuclear Safety (DNS), and the Illinois Department of Law Enforcement, Division of State Police, which demonstrated a good capability to respond at their facilities in Springfield and in the field following up similar capable responses demonstrated during earlier exercises. State-level performance included the State ESDA Region 5 office at Wheaton, and the ESDA and DNS forward (near-scene) mobile facilities established near Wadsworth. Overall, the State-level response was good.

The Wisconsin Division of Emergency Government (DEG) last demonstrated its capabilities to respond at its EOC in Madison during the Kewaunee Nuclear Power Station exercise six months earlier. Improvements based on earlier recommendations were noted, so that the State-level operation was well demonstrated. This performance included the State Southeast Area EOC at Waukesha. Thus, only minor deficiencies were observed at the State level.

The initial demonstration of the Lake County Community Coordination Center concept was highly successful. Activity by the six municipalities in Lake County (Gurnee, North Chicago, Park City, Waukegan, Winthrop Harbor, and Zion) varied based on the response required as a result of the scenario. However, demonstrated capabilities by all six municipalities met or exceeded the standards. The planned relocation of the Winthrop Harbor EOC to the Zion EOC was effective. During the exercise, two well-handled evacuation demonstrations occurred, displaying the capability to move people in the event of an imminent release from the ZNPS.

Three counties (Kenosha, Racine, and Walworth) were involved in Wisconsin. Part of Kenosha County is in the plume EPZ, and significant problems were revealed during the exercise involving direction and control, communications, and public information. The demonstrations by Racine and Walworth Counties dealt primarily with evacuee reception and care matters which met or exceeded the standards.

Positive observation highlights included:

- Highly successful demonstration of the Community Coordination Center concept at Lake County.
- Effective demonstrations of evacuations, including movement of about 150 volunteer senior citizens from Zion to the Richmond reception center.
- Leadership, dedication and effort by the municipal officials and staff in Illinois.
- Cooperation between Winthrop Harbor and Zion resulting in the effective relocation and absorption of the Winthrop Harbor EOC staff into the Zion EOC.
- Evidence of lessons learned during earlier exercises by the improvements made in all categories for the Wisconsin State Division of Emergency Government's EOC.
- Apparent effectiveness of the joint media center concept.

Negative observations included:

- Incorrect telephone numbers provided to the State of Wisconsin.

III. EXERCISE SCENARIO

SYNOPSIS AND CRITIQUE:

The exercise scenario was developed by the Commonwealth Edison Company in coordination with the States of Illinois and Wisconsin to provide an outline of a possible course of events at the Zion Nuclear Power Station (ZNPS). The accident events were simulated on July 29, 1981, to enable a detailed response by the ZNPS and Commonwealth Edison Company personnel, as well as to accommodate the off-site response exercise in which the ZNPS provided appropriate interface with the States involved. Thus, the State and local exercise events were driven by the simulated events and actual response times by plant personnel at the ZNPS.

The exercise was initiated at the ZNPS by simulated reactor troubles at 0600 which resulted in an Alert condition declaration approximately 30 minutes later. Approximately 45 minutes later (about 0715) a Site Area Emergency was declared. About 2 hours later simulated conditions deteriorated to the point where a General Emergency declaration was made. The Illinois Department of Nuclear Safety (DNS) was notified of plant conditions. About 90 minutes later (1052) a radioactive release was reported to DNS of approximately 5.55×10^8 micro curies/second. Approximately 2 hours later the release was stopped, events were under control at the ZNPS, and no further release was anticipated. At 1320 a reduction of Emergency classification to Alert was announced. At approximately 1600 the exercise was terminated.

Scenario weather conditions were developed so that the plume would move in a northerly direction along the lake shore thereby affecting both Illinois and Wisconsin. This forced play in Illinois to primarily two of the six municipalities located in the 10 mile EPZ, plus the Lake County Community Coordination Center. However, all municipalities were involved to the degree necessary to respond to the scenario.

The master scenario was developed by and for Illinois. Also specific scenarios were developed for various sites, including the affected areas of Lake County and the six municipalities.

A recapitulation of the scenario events leading to State and local response is shown below. All times were real times for the exercise date of July 29, 1981.

Event or Condition	Scheduled Times
Normal operations at ZNPS	Prior to 0600
Reactor troubles begin	0600
Alert Condition Declared	0600
Site Area Emergency Condition Declared	0715
General Emergency Condition initiated at ZNPS	0918
Release detected at ZNPS	1052
Release announced via NARS	1122
Repairs completed, release stopped	1242
Reduction to Alert Condition - Plant condition stable	1320
End of exercise	1600

It appeared that the timetable of exercise events was closely withheld from the participants. However, the exercise date as well as the general time of the first exercise event apparently were known. It is difficult to keep general information of the exercise date secret when actual demonstration of evacuations using volunteers require some advance administrative preparations, such as arranging for the volunteer participants, etc.

Recommendations pertaining to the scenario and the exercise in general are given under appropriate sections in the evaluations provided in the following Parts IV and V of this report.

IV. EVALUATIONS AND RECOMMENDATIONS - ILLINOIS

A. Assignment of Responsibility (Organization Control)

STATE:

Illinois had demonstrated its capabilities during three earlier nuclear power plant exercises, and its capabilities pertaining to organization and assignment of responsibilities met or exceeded standards. Each organization reported, appeared knowledgeable of responsibilities, and carried out roles accordingly as the scenario required. Thus, State participation at its State EOC in Springfield was satisfactory and has become almost routine. Field participation by the ESDA and DNS personnel and equipment was well demonstrated, including the State Region 5 office.

LOCAL JURISDICTIONS:

The exercise demonstrated that the primary responsibilities for local emergency response in Lake County, as well as the six municipalities had been assigned and that each individual and supporting organization was aware of assigned responsibilities. It appeared that most all personnel were fully cognizant of their plans and procedures.

Highlight of the exercise was the highly successful initial demonstration of the Lake County Community Coordination Center in Illinois. The cooperation between the Lake County officials and the representatives of the six municipalities was outstanding and should be attributed to capable administrators at the county and community level.

Direction and control measures and leadership by local officials was outstanding in most local jurisdictions, with extensive involvement by staff. This was most evident at the Lake County Community Coordination Center, Gurnee, North Chicago, Winthrop Harbor and Zion. It should be recognized that the scenario did not call for the stress of carrying out protective actions at Gurnee, North Chicago, Park City, and Waukegan, which were not in the plume pathway, and may have affected their participation to some degree.

At Park City, the police chief, who was also the ESDA director, did a good job but should have delegated more of the responsibilities to his staff. In Waukegan, the police chief, did a creditable job in fulfilling his responsibilities, perhaps in lieu of elected officials who were not always present in the EOC and did a good job, though more responsibilities could have been delegated to the staff. However, the scenario for Waukegan dealt primarily with traffic and access control, thereby necessitating the technical leadership from the police chief.

Observers noted that neither Waukegan nor Zion demonstrated a capability for 24-hour protracted operations by conducting a full shift change. However, at Zion this was discussed with officials who explained how they would do this and named key people for key positions, thereby indicating that a capability appears to exist.

RECOMMENDATIONS:

1. In future exercises each local jurisdiction must demonstrate a clear capability to function on a 24-hour basis for an extended time by replacing key personnel, and by briefing all incoming personnel to bring them quickly up-to-date and provide continuity of operations. (Reference: NUREG-0654 A.4).

2. In future exercises, the scenario should provide for all Waukegan EOC personnel, including the mayor, to take a more active role in emergency response operations. (Reference: NUREG-0654 A.1 and A.2)

3. Additional experience through training and/or exercising is recommended for all emergency response personnel in order to further improve direction and control procedures, increase staff familiarization with the plans and precedures, and fine tune the good performances in Lake County and the six municipalities within the county.
(Reference: NUREG-0654 A.2, N.1, N.2, N.3, and 0.4)

C. Emergency Response Support and Resources

STATE:

The State had previously demonstrated an adequate capability for conducting and requesting the use of available Federal resources in the Department of Energy's Radiological Assistance Plan and the Interagency Radiological Assistance Plan during three earlier exercises. In this exercise there was an active Federal operational role by the participation of FEMA, NRC, DOE, and EPA, all in support in roles to the two States involved in this exercise.

LOCAL JURISDICTIONS:

Local capabilities to support Federal response appeared to meet Standards. The Commonwealth Edison Company provided technical representatives at Lake County, all local EOCs, and the Joint Public Information Center. Supporting organizations were observed at the local level, including various volunteer groups, scouts in Zion, Civil Air Patrol, American Red Cross, American International Hospital (in Zion), and the Great Lakes Medical Center.

RECOMMENDATION:

None.

D. Emergency Classification System

STATE AND LOCAL:

Both State and local governments generally effectively used the emergency classification system to make proper notifications, mobilize resources, and initiate appropriate protective actions, although the classification system, related terminology, and correlated action levels appeared not to be fully understood in several municipalities, indicating that additional familiarization and training is needed.

RECOMMENDATION:

None.

E. Notification Methods and Procedures

LOCAL JURISDICTIONS:

All local jurisdictions demonstrated a capability to notify officials and staff in a timely manner.

Local notification of the public was demonstrated by all jurisdictions with some variation. Local procedures for using EBS were employed. In Gurney, North Chicago, Park City, and Zion full notifications were made using emergency vehicles with PA systems (silent operations), while in Waukegan and Winthrop Harbor, runs were made in selected areas. In Waukegan, it took 37 minutes to notify one of the seven sectors in the city, and observers were told that sufficient vehicles would have been dispatched to cover all sections in a real emergency. In Winthrop Harbor, some emergency vehicles were not available for the exercise, but full city-wide notification runs were reported to have been made earlier.

In waukegan, nursing homes were to be alerted by emergency vehicles during their notification runs, but the system to alert disabled (deaf) citizens in private homes and to provide assistance, and drivers (volunteers or otherwise) who might provide the disabled with transportation was not evident nor was there similar evidence observed in other jurisdictions. Waukegan has a sizeable Spanish-speaking population. Observers were told that public notification announcements had been written in Spanish as well as in English and would be read over the PA system in both languages during route alerting. However, there was no provision for having Spanish speakers read the message, thus it is open to question whether such messages could be intelligibly understood by their intended recipients.

RECOMMENDATIONS: (See also Recommendation 9)

4. All jurisdictions should make provision for notification and alerting and transportation of the disabled and those requiring special assistance. The lists of such individuals along with their addresses and telephone numbers now in the plan and an associated list of volunteer drivers, sign language users etc., could be a way to improve the present system. (Reference: NUREG-0654 E.6 and J.10.c & d)

5. Persons speaking Spanish or pre-recorded cassette messages in Spanish should be used to alert and notify Spanish-speaking residents. (Reference: NUREG-0654 E.6 and J.10.c & d)

F. Emergency Communications

STATE:

Good communications capability was shown between the State ESDA EOC, the DNS Radiological Emergency Assessment Center (REAC) at Springfield, and State field elements, as well as between the State and the Lake County Community Coordination Center. Newly installed telephone lines at the ESDA Van were inoperable and after some delay were repaired by the telephone company, but backup communications systems were successfully employed. Internal communications at the ESDA Forward Command Post were improved with the addition of facsimile and reproduction equipment, and personnel were kept fully informed by handouts and briefings. Communications including facsimile between the Media Center in Zion, the ZNPS EOF, the JPIC, and the State EOC were good throughout the exercise. However, it is to be noted Wisconsin was provided incorrect telephone numbers of the JPIC which caused delays in Wisconsin's capability to coordinate emergency information vital to their operations. The NARS channel was used effectively throughout the exercise, although there appeared to be some delay between the incident times and receipt of the information at the local level.

LOCAL JURISDICTIONS:

Each of the local municipalities had ample communications capability with telephones backed up by radio systems. There were no problems with communications between the Lake County Community Coordination Center and the six municipal governments.

RECOMMENDATION:

None.

G. Public Education and Information

STATE:

The Joint Media Center was a successful operation. Coordination between Illinois and Wisconsin appeared weak. There needs to be greater effort on Illinois' behalf to improve the coordination of information from the media center to Wisconsin. At times the news media had difficulty getting information and then having it confirmed so it could be released for public action.

Reentry information was held until both States were together on the response. Clear concise explanations were given to the media aided by good graphics. It was apparent that the PIOs at the Media Center had a good understanding of the situation and were familiar with the terminology.

The pamphlet prepared by the Commonwealth Edison Company, "What To Do In Case of A Nuclear Station Emergency", does have a deficiency in that it does not specifically address the issue of transient population. This is important due to Illinois Beach State Park locations two miles south of the plant.

LOCAL JURISDICTIONS:

Interface with the media was excellent at the Lake County Community Coordination Center. Press kits were available. Releases from the Media Center were sent by facsimile to the Community Coordination Center for use in conducting local news briefings. There were excellent, capable, articulate spokespersons conducting the news conferences. They fielded questions well and responded appropriately to questions outside their areas of expertise. There was excellent cooperation and rapport with EBS stations.

The advent of the Community Coordination Center concept apparently resulted in less contact with the media by the separate municipalities, although contact with EBS stations was made by the mayors in several jurisdictions. All public information messages were coordinated with the Joint Media Center prior to release.

RECOMMENDATIONS:

6. A greater Leadership role by the Illinois ESDA in more fully coordinating the notification of Wisconsin on events, actions taken, and recommendations in a timely manner.

7. A supplement to the utility pamphlet should be considered addressing the transient population. (Reference: NUREG-0654 G.2)

8. While designated local spokespersons or PIOs are considered an integral parr of the response team, clarification of the local-joint Media Center interface and roles needs to be made, possibly by providing a local representative at the Media Center who keeps in contact with his EOC by telephone and participates in briefings for the media, as appropriate. This would better assure consistent news releases. (Reference: NUREG-0654 G.3 and G.4)

H. Emergency Facilities and Equipment

STATE:

The State ESDA EOC in Springfield was previously demonstrated to be adequate to carry out the provisions of the IPRA. Also previously demonstrated were the DNS overall assessment and response functions handled at the State Radiological Emergency Assessment Center (REAC) located several miles distant from the State ESDA EOC, together with a DNS liaison representative at the State EOC working with the ESDA staff.

Both the State ESDA and State DNS REAC have mobile facilities (trailers and vans) designated to coordinate field activities. These are sent to the vicinity of the 10-mile EPZ. For this exercise, these mobile facilities, the DNS Radiological Field Team Command Center (RAFTCC), and the State ESDA facilities were set up near Wadsworth about 7 miles west of the ZNPS. It was evident, as noted by the observers, that improvements at these facilities have been made since the previous exercise at Quad Cities and particularly concerning information exchange andincluding the use of the Illinois Department of Transportation mobile facilities for conducting briefings.

The State ESDA Region 5 office is at Wheaton with adequate space and supporting facilities to handle its responsibilities in such incidents.

The Moose Hall in Zion served as the Joint Media Center.

LOCAL JURISDICTIONS:

It was evident that a great effort had been made to prepare facilities for the Lake County Community Coordination center near Libertyville in time for the exercise. Construction work was still in progress, but indications are that when finished the facility will be adequate.

All of the municipal EOC facilities provided good working space, together with necessary supporting amenities. All employed adequate security measures. Two of the local EOCs are still being developed (North Chicago and Zion), but both are good as they exist. The Winthrop Harbor EOC space is not in a protected area of the city hall, and when it became apparent that the plume would pass directly over the facility, it was necessary to immediately move to the Zion EOC, which has ample space to accommodate both operations. Facilities employed for handling evacuees were adequate.

Use of status boards and displays at local EOCs was adequate for conducting the emergency operations, but generally could be improved upon by more user experience and familiarization.

RECOMMENDATION:

9. Localities should continue to work towards completion of their EOC facilities and should conduct additional exercises or drills to fine tune their use of these facilities including displays and equipment. (Reference: NUREG-0654 H.3 and N.1)

I. Accident Assessment

STATE:

The State again demonstrated its capability to (1) classify accident conditions and make timely reports, (2) calculate off-site dose projections, and (3) assess the quantity and quality of radiation released to the environment and make timely recommendations towards actions to protect the public. These State-level functions, primarily by the Illinois Department of Nuclear Safety (DNS), were successfully carried out at Springfield and at the DNS mobile facilities located near Wadsworth for this exercise.

Improvements were observed among the ESDA and DNS mobile facilities in the coordination of activities and information exchange, particularly concerning radiological matters. These improvements apparently were the result of recommendations following earlier exercises.

Although accident assessment is not a local responsibility in accordance with the IPRA, the Zion ESDA Director happens to be a licensed nuclear power plan operator. He was able to maintain frequent contact with the ZNPS staff on his own, and thus was able to frequently obtain information as to the status of the ZNPS, as well as information about potential or actual releases. This enhanced the Zion response as participants were able to better understand events and the recommended protective actions received over NARS, and also were better prepared to take the actions once the recommendations were received.

This experience, as well as observations at earlier exercises in Illinois and elsewhere, pointed out the desirability of forwarding more frequent situation updates to the local jurisdictions, possibly as often as every 30 minutes, even when conditions have not changed in the meantime. As observed, local jurisdictions are left "hanging" for long periods while DNS makes its calculations and/or the plant is taking its own actions, without any indication of the current status or outlook. This suggests that the DNS/NARS procedures might be reviewed and modified to better keep local jurisdictions periodically informed. In this exercise, there were apparent delays, both in informing governmental units that the release had started (about 30 minutes) and ended (about 54 minutes), although in accordance with current DNS confirmation procedures. In such instances, such information could have been immediately provided to the local jurisdictions, along with cautions to take no action until further advised by DNS, so at the least, the local jurisdictions could be in a position to make anticipatory preparations.

RECOMMENDATIONS:

10. Consideration should be given to review and possible modification of plans and procedures to provide for periodic status reports and updates of the situation to local jurisdictions over NARS or some other system. (Reference: NUREG-0654 E.6, I.8 and P.4)

J. PROTECTIVE RESPONSE

STATE:

The State plan includes a range of protective actions for the plume exposure pathway EPZ for emergency workers and the public and provides guidelines for choosing such actions. During the exercise, the State demonstrated its capability to make appropriate decisions regarding protective actions during such an emergency. Appropriate coordination took place with the State of Wisconsin, so that actions recommended by the two States were complementary and/or appeared consistent for the perception by the public.

LOCAL JURISDICTIONS:

Local play varied considerably in this exercise as not all localities were in the areas affected by the plume to including Gurnee, North Chicago, Park City, and Waukegan. At Park City and at Waukegan, shelter notification was not only premature but proved to be unnecessary. North Chicago had well-developed procedures ready to be followed if needed. Both Zion and Winthrop Harbor did superior jobs in implementing recommended protective actions, particularly in the area of traffic control measures. Winthrop Harbor also evacuated its EOC in a prompt and efficient manner, moving to the Zion EOC as plans call for. This was a fine operation with minimum disruption of the continuity of operations. However, in returning to its EOC, the Winthrop Harbor staff should have been divided to have a two-phase return, which would provide for full continuity of operations.

There were two demonstrated evacuations which were accomplished in a very effective manner. It was evident that extensive planning for these evacuations had taken place and volunteers had been designated. Approximately 150 senior citizens participated in the ILlinois evacuation from Zion to Richmond. All were volunteers and knew in advance of the exercise and their role. Altogether, the operation went as scheduled with no difficulties. The coordination of the changing of police escorts as the convoy of buses passed through each jurisdiction was good. Registration procedures at the Reception Center in Richmond were handled by the American Red Cross, and any special needs of the senior citizens were identified at the time of registration. If special medical needs had been required, the center personnel indicated that they had the capability to take care of them, although these volunteer evacuees had no such needs.

Proper dosimetry of the buses upon arrival at the reception center was carried out, and a small number of evacuees were checked upon debarking from each bus. Evacuees were then promptly registered and fed without delay. Almost all of the volunteer evacuees appeared to have benefited from the activity.

A second demonstration consisted of the evacuation of about a dozen persons simulating hospital patients from the American International Hospital in Zion in a southerly direction down Route 173 to the Great Lakes Medical Center. This, too, was a highly effective operation, including the police coordination for expediting movement of the evacuees along the route from one department jurisdiction to another.

A minor hitch occurred when the American International Hospital became aware that the evacuation of the senior citizens was occurring before their own demonstration evacuation. Since they had not yet received instructions to commence their own evacuation, there was some initial concern, and confusion existed for awhile. Thus better coordination of such evacuation demonstrations needs to be made.

RECOMMENDATION:

11. In future exercises, steps should be taken to assure that notification information be disseminated in a coordinated manner to special facilities. It is recognized that some special facilities maybe subject to start protective evacuation before others, dependent upon locating facility's population. (Reference: NUREG-0654 J.10)

K. Radiological Exposure Control

STATE AND LOCAL:

This function is primarily a local responsibility, although support is provided by the State. Illinois did provide all of its monitoring staff with appropriate dosimetry. However, outsiders who came into the RAFT EOC were not checked with detection equipment for possible contamination. Establishment of roadblocks for traffic control is shared by the State Police and the jurisdictions, each being assigned specific locations. The State Police activity was not as smooth as observed in earlier exercises, apparently because the District 2 Commander did not transfer control to the mobile site resulting in some awkwardness in handling requests for roadblocks, traffic control, etc.

Local activity varied somewhat due to the location of some jurisdictions outside of the area affected by the plume, but generally a satisfactory demonstration occurred. All municipalities and the Lake County Community Coordination Center (except that no activity was observed in North Chicago) issued dosimetry equipment, and kept records. Detection and decontamination procedures and capability were seen only at Zion, where the monitoring of the Winthrop Harbor EOC staff took place prior to their entry into the Zion EOC. Also, appropriate detection procedures were demonstrated at the Richmond reception center. Roadblocks were observed to be manned by Waukegan, Winthrop Harbor, and Zion. There were three roadblock locations that were designated to be manned by either Zion or Lake County in the plan. When Zion reported to the County that they could not man those three, it was expected that the county would take over the responsibility, but evidently that did not occur.

RECOMMENDATION:

12. In future exercises all local jurisdictions should demonstrate the capability to monitor possible exposed personnel and to take steps for decontamination measures. (Reference: NUREG-0654 K.3 and K.5)

L. Medical and Public Health Support

STATE AND LOCAL:

The exercise provided little specific medically related activity for State and local play, with the exception of the evacuation of volunteers simulating patients of the American International Hospital in Zion to the Great Lakes Medical Center. This was to be coordinated by the county Hospital Community Center Coordinator, as called for in the special hospital scenario for the exercise. The evacuation (as reported under Protective Response above) was carried out successfully.

Support by the medical facilities and public health agencies at the Lake County Community Coordination Center was considered commendable by the observers. Activities were well coordinated by Lake County health agencies and St. Theresa Hospital. Medically related activities were observed at only one municipality, Winthrop Harbor, where the Mayor simulated the onset of a serious illness. Local rescue equipment and two rescue officials arrived within 5 minutes, and actually administered necessary treatment.

RECOMMENDATION:

13. Future exercises should call for more medical activity related to contaminated patients and involve the site specific hospitals or closest hospitals having a capability to care for contaminated patients as listed in the plans. (Reference: NUREG-0654 L.1, L.3, L.4, and N.1)

M. Reentry and Recovery

STATE AND LOCAL:

State-level reentry and recovery functions were demonstrated in previous exercises, and were again carried out in an organized and timely fashion.

At the Lake County Community Coordination Center deliberate care was taken by all participants to assure systematic procedures were followed for reentry and recovery. Reentry was deliberately deferred pending an agency status check to assure that nothing was overlooked.

Municipal activity was varied because of the location of the jurisdictions in relation to the area affected by the plume. However, at Park City, the Chief of Police briefed the staff on what actions would have been required for reentry had an evacuation taken place. Similar discussions took place at North Chicago and Waukegan. Waukegan demonstrated a good understanding of proper reentry and recovery procedures. Patrol cars were directed to continue to man traffic control access points well after it was heard that the release had stopped. Reentry procedures enacted were confined to removal of traffic controls, etc., since Waukegan was not in the area that required evacuation. At Zion, the discussion by local officials and their rationale of the recovery-reentry procedures was excellent, as they obviously were familiar with their plans and procedures. There was no reentry-recovery activity observed at Winthrop Harbor (which did not have a full-time observer) but it was noted that the gap of some 15 minutes during the return of the staff from the Zion EOC may have disrupted such activity.

Appropriate return procedures of the two groups that were evacuated to Richmond and the Great Lakes Medical Center were observed.

RECOMMENDATION:

14. More emphasis should be given to reentry and recovery activities in future exercises, and the scenario should provide for appropriate activity including, if possible, partial reentry (some areas determined clear earlier than others) as well as full reentry play. (Reference: NUREG-0654 M.1 and N.1)

N. Exercises and Drills

STATE AND LOCAL:

It was evident that the exercise provided significant benefit to the participants, particularly the local jurisdictions, to the extent their role was defined in the scenario. The State participated as they did in three previous exercises during the past nine months.

Free play events were seen to be locally introduced to provide some activity during relatively quiet periods of the nuclear accident portion of the exercise at Gurnee, Park City, Zion, and Waukegan. These events usually dealt with day-to-day (accidents and police fire) type emergencies.

Section III of this report discussed the Exercise Scenario, and several recommendations which impact on future exercises and/or drills are made under various parts of this Section IV. Recommendations 3, 12, 13, and 14 should be referred to and carried out.

RECOMMENDATION:

None.

O. Radiological Emergency Response Training

STATE AND LOCAL:

Most of the State and local officials and staff appeared familiar with their plans and seemed to know their assignments and roles. Additional experience through training by means of training exercises and drills is needed to fine tune current capabilities and to maintain the readiness levels achieved. In this respect, recommendation 3 provided earlier in this report should be carried out.

RECOMMENDATION:

See #3.

P. Radiological Emergency Response Plans

STATE AND LOCAL:

Based upon the observations of the exercise, the Illinois Plan for Radiological Accidents (IPRA) is considered very good; however, some fine tuning should be carried out as indicated by the results of the exercise to update the general and site-specific plans and assure that State and local plans are mutually supportive. Continuing efforts should be made to assure familiarity of these plans by all affected jurisdictions and emergency response personnel, and to assure a complete exchange of information between local jurisdictions and State.

RECOMMENDATION: (See also Recommendation 9)

15. Based on the experience of this exercise, the existing plans and necessary changes and procedures should be reviewed to assure that they are fully up-to-date and completely compatible between the utility, State and the local jurisdictions. (Reference: NUREG-0654 P.4 and P.5)

PART V - EVALUATIONS AND RECOMMENDATIONS - WISCONSIN

A. Assignment of Responsibility (Organization Control)

STATE:

The exercise clearly demonstrated that the emergency staff at the State EOC in Madison is well organized to respond to radiological emergency at the Zion plan affecting Wisconsin. There was full play at the State EOC with the nucleus of the emergency operations staff from the Division of Emergency Government (DEG) augmented by representatives from other State agencies with support capabilities in accordance with existing plans. Maximum effort was focused on the counties since the State EOC has been exercised two times within the last year. In this connection, emergency staffing was improved, profiting from the lessons learned in previous exercises. Depth of staffing was demonstrated by a smooth shift change, and the second shift was briefed prior to taking over. Decisions were made in a professional manner, and the overall operation was well managed. There were frequent status briefings, so the entire staff was kept continually aware of the situation.

The Wisconsin State area EOC at Waukesha was evaluated as exceeding minimum standards in basic staff organization to respond to emergency.

LOCAL JURISDICTION:

The exercise demonstrated to observers that the primary responsibilities for local emergency response in Racine County have been assigned and judged outstanding. Also, in Walworth County, the effectiveness of the emergency organization was considered as exceeding minimum standards. But in Kenosha County, the emergency organizational capability was evaluated as weak. No single authority appeared to be in charge in Kenosha County with little interaction between the director and staff. The staff was enthusiastic, but there was need for a well-defined leadership role, essential for proper direction and control.

RECOMMENDATION:

1. In kenosha County, direction-and-control authority must be clearly specified in order to meet minimum requirements and rectify deficiencies identified during this exercise. (Reference: NUREG-0654 A.2)

C. Emergency Response Support and Resources

STATE:

Wisconsin has demonstrated this capability during past exercises and achieved a successful level.

LOCAL JURISDICTION:

Both Racine and Walworth Counties exceeded minimum standards in using support resources. However, in Kenosha County, Radiological Emergency Officer was not present, which resulted in no EOC radiological emergency resource capability and support. That individual, for this exercise, was assigned a supportive function in another location in the State. There is a distinct need for this capability in the local EOC where the senior officials have need to be promptly apprised of the status and interpretation of information.

RECOMMENDATIONS:

2. Future exercises should provide events in the scenario that will require greater Federal assistance play, including realistic deployment of available DOE and NRC resources. (Reference: NUREG-0654 C.1 and N.1)

3. Local governments, particularly Kenosha County, should assure that all available resources, including radiological emergency resources are used during such emergencies. (Reference: NUREG-0654 C.4)

D. Emergency Classification System

STATE:

Knowledge of the standard emergency classifications and action level scheme as described in the State response plan was adequately demonstrated during the exercise. However, there is need for implementing SOPs and checklists, oriented to each specific level of emergency to assist in State agency responses.

LOCAL JURISDICTIONS:

Both Racine and Walworth counties exceeded minimum standards and took emergency actions consistent with the recommendations of the utility plant. However, in Kenosha County, most of the staff arrived without appropriate notifications, and there was need for further training in interpreting necessary actions in response to changing levels of the emergency interaction.

RECOMMENDATION:

4. Further training in interpretation of emergency classifications at all levels must be stressed, so that participants will be able to respond readily and spontaneously to changing classification levels, including the development of appropriate implementing SOPs and checklists oriented to each specific emergency classification for State and local response organizations. (Reference: NUREG-0654 D.3, P.4, and P.5)

E. Notification Methods and Procedures

STATE:

The State level emergency organization demonstrated a capability to implement notification procedures in accordance with their current plans. Mobilization of the staff and manning of the EOC occurred smoothly. The overall elapsed time of 45 to 50 minutes from the receipt of the declaration of the "Alert" condition until the State DEG EOC became operational appeared excessive.

LOCAL JURISDICTIONS:

Both Racine and Walworth counties exceeded minimum standards in staff and public notifications. In Kenosha County, notification methods and procedures were considered acceptable, but there were problems. There was need for better message control in staff notification. Also, the area of follow-up and implementation needs improvement; e.g., when problems were encountered, there was no attempt to verify or use back-up methods. There was evidence of interface problems in the Joint Media Center. (See page 15 Illinois)

RECOMMENDATION:

5. Kenosha County EOC officials need further training in notification implementation procedures, as well as in improving message control. (Reference: NUREG-0654 E.2)

F. Emergency Communications

STATE AND LOCAL:

Good provision for communications was observed among State-level organizations. This included a direct line to the ZNPS. Communications links to FEMA for simulated coordination of Federal assistance were also exercised. The initial critique of the exercise revealed some problems in communications between the State EOC and the State area EOC at Waukesha; e.g., the Governor's declaration of emergency message was either incompletely transmitted or only received in part. Also, there was difficulty with the radio link between the State Area EOC at Waukesha and Kenosha and Walworth counties.

In Racine County, emergency communications were considered outstanding; in Walworth County, minimum standards were exceeded. But in Kenosha County, minimum standards in emergency communications were not met. Some of the problem areas observed included:

- Existing procedures were not followed in handling the initial alert message.
- There were no direct communications with the plant or EOF.

Thus, it appears that a direct line is needed to the plant or to the near-site EOF, as well as to the State Area EOC. Radio communications were considered good, but telephone communications were deficient as noted above.

RECOMMENDATIONS:

6. In Kenosha County, telephone communications between the utility and the county EOC should be improved by deploying a direct line between these and other relevant installations; also, training in existing communications procedures should be improved. (Reference: NUREG-0654 F.1 and 0.4)

7. Telephone and radio communications systems and procedures should be examined to determine the source of the communications transmission and message handling difficulties reported to have occurred during the exercise. A State study is needed to examine the flow of information between the State EOC, State area EOC, and relevant county EOCs. The objective should be to identify ways to improve existing communications. (Reference: NUREG-0654 F.1 and F.3)

G. Public Education and Information

STATE AND LOCAL:

Although the main effort in public information during this exercise was at the local level, the public information function at the State DEG EOC was ready to operate. The press room was equipped with maps and displays. Press briefings were held (although there were only two media representatives present since the public information effort at State level was low key). Several comprehensive media advisories had been distributed to the news media before the exercise. The Commonwealth Edison Company distributed a pamphlet to the "public at Risk" concerning protective measures to include evacuation.

Wisconsin staffed the JPIC with three public information officers who handled the media releases in a timely fashion. They were able to function even though they were limited to one telephone line in the EOC.

Racine County was considered outstanding in public information. The handling of public information in Walworth County was not observed. Kenosha County was evaluated as meeting minimum standards.

A requirement was identified as follows:

> There is a need for an overall radiological emergency response public information plan in Wisconsin in order to effect more efficient handling of public information by all elements and to assure adequate coordination with the State of Illinois and the Illinois communities at risk.

RECOMMENDATION:

None.

H. Emergency Facilities and Equipment

STATE:

Internal arrangements of the State DEG EOC were observed to exceed minimum standards. Problems noted in the previous exercises have been solved.

The State Area EOC at Waukesha, while evaluated as exceeding minimum standards, could be improved by the addition of more telephones and dedicated lines. Security was excellent.

LOCAL JURISDICTIONS:

Emergency facilities and equipment at both Racine and Walworth Counties were evaluated as outstanding. The Kenosha EOC failed to meet minimum standards. Facilities could be improved upon. Available maps were not used until late in the exercise. Message boards were inadequate and incomplete. Presumably, the above deficiencies will be rectified when the new EOC, now under construction, is completed.

RECOMMENDATION:

9. The deficiencies noted concerning the Kenosha County EOC should be rectified with the completion of the new county EOC, including working space, and maps and displays. (Reference: NUREG-0654 H.3)

I. Accident Assessment

STATE AND LOCAL:

State-level functions were successfully carried out at the State DEG EOC in Medison by the Wisconsin Department of Health and Social Services, Division of Health (DOH). Effective coordination with Illinois was accomplished as an ESDA liaison officer functioned at the State DEG EOC. Also, a Wisconsin DEG liaison officer functioned at the Illinois ESDA EOC.

While accident assessment is not a local responsibility, local operations would have been improved if local officials received adequate operational information to aid in decision making.

The State demonstrated a good capability for providing methods, equipment, and expertise for rapid assessment of real or potential radiological hazards existing in the liquid or gaseous pathway. This included activation, notification, transportation, communications, and monitoring equipment.

RECOMMENDATION:

10. Encourage and assist the counties (where local capability exists) to play a more active role in accident assessment. This may require some modification of the plans in specific counties. It has been observed elsewhere that where the county staff closely followed the radiological situation, they were able to more effectively respond and also were able to avoid unnecessary actions that would have followed receipt of garbled radiological information. (Reference: NUREG-0654 I.8 and P.4)

J. Protective Actions

STATE AND LOCAL:

The evacuation process was not monitored at the State DEG EOC, but basic decision-making and response guidance developed were correct and in accordance with existing plans and criteria; e.g., the guidance on the protection of milk animals given on Site Area Emergency (within 2 miles) and General Emergency (within 10 miles). State EOC staff, including Staff agency representatives, were kept abreast of the developing situation by means of periodic briefings, use of the situation maps and copies of all messages. Of special note was the rapid preparation and distribution of the staff briefing summaries, which contained situation status information and actions taken and planned.

There was inadequate information received at the State DEG EOC concerning the status of local operations (progress of local response activities, such as local access and traffic control measures, status of sheltering or evacuation, etc.). Thus, there appears to be a need for a system to provide prompt periodic progress reports by the local jurisdictions to the State Area and the State DEG EOCs.

Evacuation centers were observed and it was determined that the host county (Walworth) adequately demonstrated the ability to staff and operate the Host Reception Centers and provide for the temporary welfare of the evacuees.

- Kenosha County met minimum protective action standards.

RECOMMENDATION:

11. Procedures should be established to provide for prompt reporting of operational information from the local level to the State DEG EOC, so that state staff members are kept adequately informed of the achievement of the protection of the public. (Reference: NUREG-0654 A.2, E.6, J.9, and J.10)

K. Radiological Exposure Control

STATE:

This is primarily a local function with State support, except for the protection of the State's own emergency workers, which was demonstrated in earlier exercises.

Radiological monitoring operations at the State Area EOC at Waukesha were reported as efficient, despite radio trouble in one vehicle, and considered to exceed the minimum standards.

LOCAL JURISDICTIONS:

The Kenosha County highway and public works personnel were well trained and carried out their assignments promptly, including the proper use of dosimeters. Overall, Kenosha County was considered to meet the radiological exposure control standards. Exposure control measures reportedly exceeded standards in Walworth County.

RECOMMENDATION:

None.

L. Medical and Public Health Support

STATE AND LOCAL:

The State Area EOC at Waukesha showed excellent coordination and control in this area as a commendable individual effort was apparent.

In Kenosha County, the Public Health Officer coordinated with the hospitals and nursing homes in an efficient and effective manner. Kenosha County exceeded minimum standards and Walworth County was considered outstanding in this area.

RECOMMENDATION:

None.

M. Reentry and Recovery

STATE AND LOCAL:

The State and local jurisdictions demonstrated above average capability to carry out reentry and recovery activities in accordance with their plans.

RECOMMENDATION:

None.

N. Exercises and Drills

STATE:

It was evident that simulated operations during this exercise had improved over previous exercises, reflecting profit from lessons learned.

In view of the State DEG EOC participation in two earlier exercises within the last nine months, a decision was apparently made to exercise the State DEG staff with limited objectives and to concentrate on the local-level operations. However, exercise documents did not reflect this situation and should have.

LOCAL JURISDICTIONS:

While all participating local governments benefited from the exercise, the need for additional training of their staffs through exercises or drills, particularly at Kenosha County, was clearly demonstrated.

RECOMMENDATIONS:

12. The status of training of the Kenosha County staff should be examined and additional exercises or drills conducted to assist them to achieve a higher degree of readiness. (Reference: NUREG-0654 N.1 and N.2)

13. The precise exercise objectives for each level of government should be specified in exercise documents so that adequate assessment can be made of performance. (Reference: NUREG-0654 N.1, N.3, and N.5)

O. Radiological Emergency Response Training

LOCAL JURISDICTIONS:

Both Racine and Walworth Counties were evaluated as exceeding minimum standards in this area. However, Kenosha County did not meet minimum standards, and there was much confusion during the early stages of the exercise. More training in radiological emergency response is needed, including knowledge of radiological matters and existing plans.

RECOMMENDATIONS:

14. Appropriate familiarization training in radiological matters should be provided to local officials, department heads, and supporting staff in all local jurisdictions (particularly, Kenosha County) within the plume EPZ. (Reference: NUREG-0654 O.1, O.4, and O.5)

15. Additional training (by conducting exercises and drills) in carrying out existing plans should serve to enhance local performance. (Reference: NUREG-0654 N.1, N.2, O.1, and O.5)

P. Radiological Emergency Response Plans

STATE AND LOCAL:

Based upon the observations of the exercise, the Wisconsin State, Racine County, and Walworth County Peacetime Radiological Emergency Response Plans are generally good; however, State level implementing SOPs are needed (see Recommendation 4). Also, efforts should be made to assure familiarity with these plans by all affected jurisdictions and their emergency response personnel. The existing Kenosha County radiological emergency response plan does not meet minimum standards. There is little evidence of interagency cooperation and understanding of the plan and it does not appear to be updated annually, e.g., no reference is made to the Joint Media Center concept, and provision is not made to make needed technical personnel available for protracted 24-hour operations.

RECOMMENDATION:

16. The Kenosha County RER Plan should be reviewed and updated to assure that this plan reflects current changes and the lessons learned from exercises. (Reference: NUREG-0654 P.4)